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HEALTH

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MONTHLY PROGRESS REPORT

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DATA AS OF 31 AUGUST 1943

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ARMY SERVICE FORCES, WAR DEPARTMENT

HEALTH

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HEADQUARTERS, ARMY SERVICE FORCES, WAR DEPARTMENT

HEALTH

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DISEASE AND INJURY

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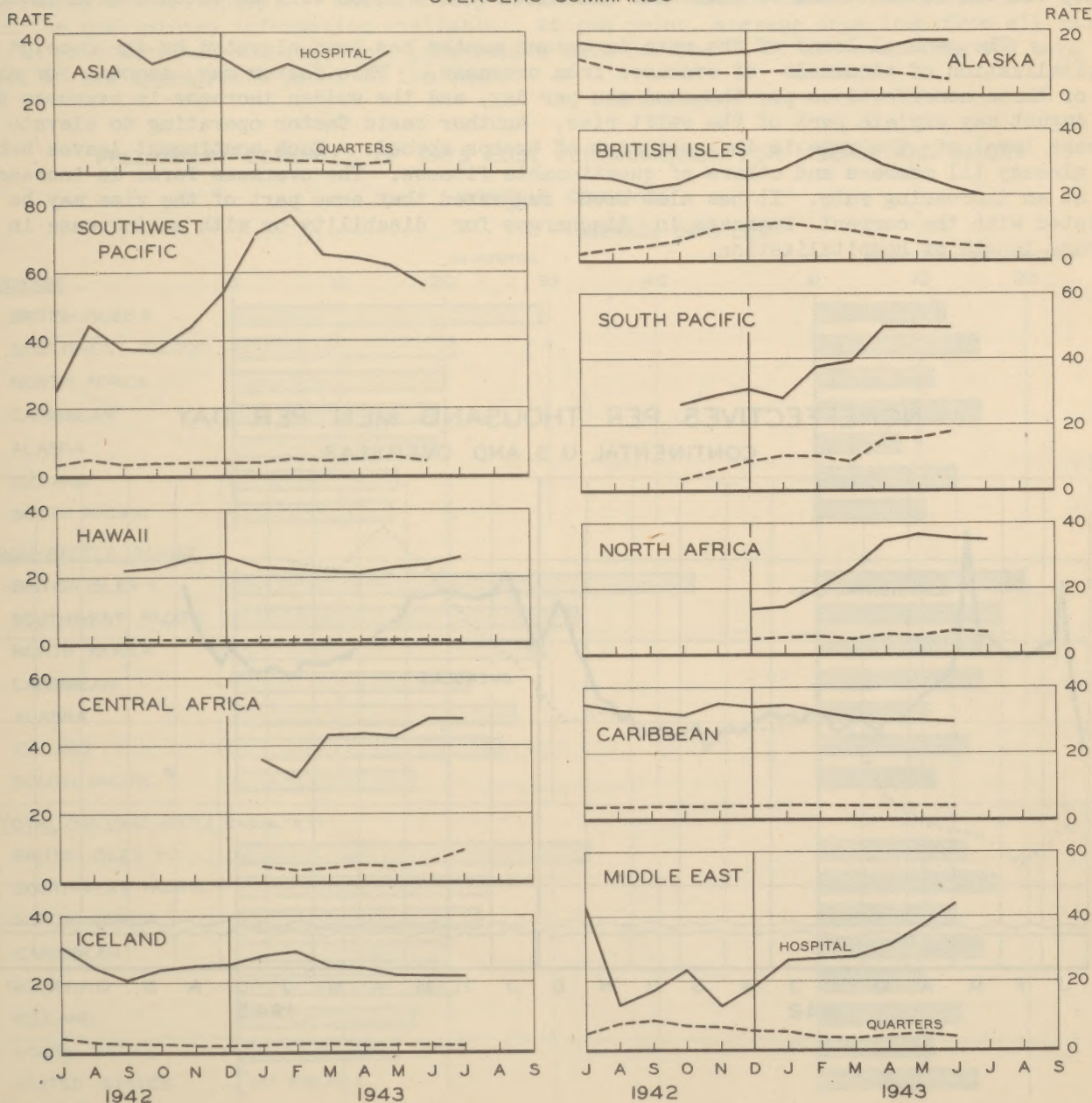
NONEFFECTIVE RATES, OVERSEAS COMMANDS

The total noneffective rate is separable not only into the components attributable to various causes of admission, especially disease, nonbattle injury, and battle injury, but also into hospital and quarters elements. In the charts which follow the total noneffective rate for each theater is separated into these two parts.

There are characteristic differences among commands with respect to the level and also the trend of the two rates, but in general the quarters component is both smaller and less subject to variation than is the hospital component. In the British Isles the quarters rate advanced sharply during the winter months, perhaps in consequence of respiratory disease, but this was not true of Iceland or Alaska. Evacuation of casualties from North Africa to the British Isles has probably influenced both elements of the noneffective rate.

It is especially interesting to note that the exceedingly high noneffective rate in the Southwest Pacific has represented primarily hospitalized personnel. This is much less true of the South Pacific, where proportionately more noneffectives have been confined to quarters.

NONEFFECTIVES PER THOUSAND MEN PER DAY OVERSEAS COMMANDS



DISEASE AND INJURY

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NONEFFECTIVE RATES, U. S. AND OVERSEAS

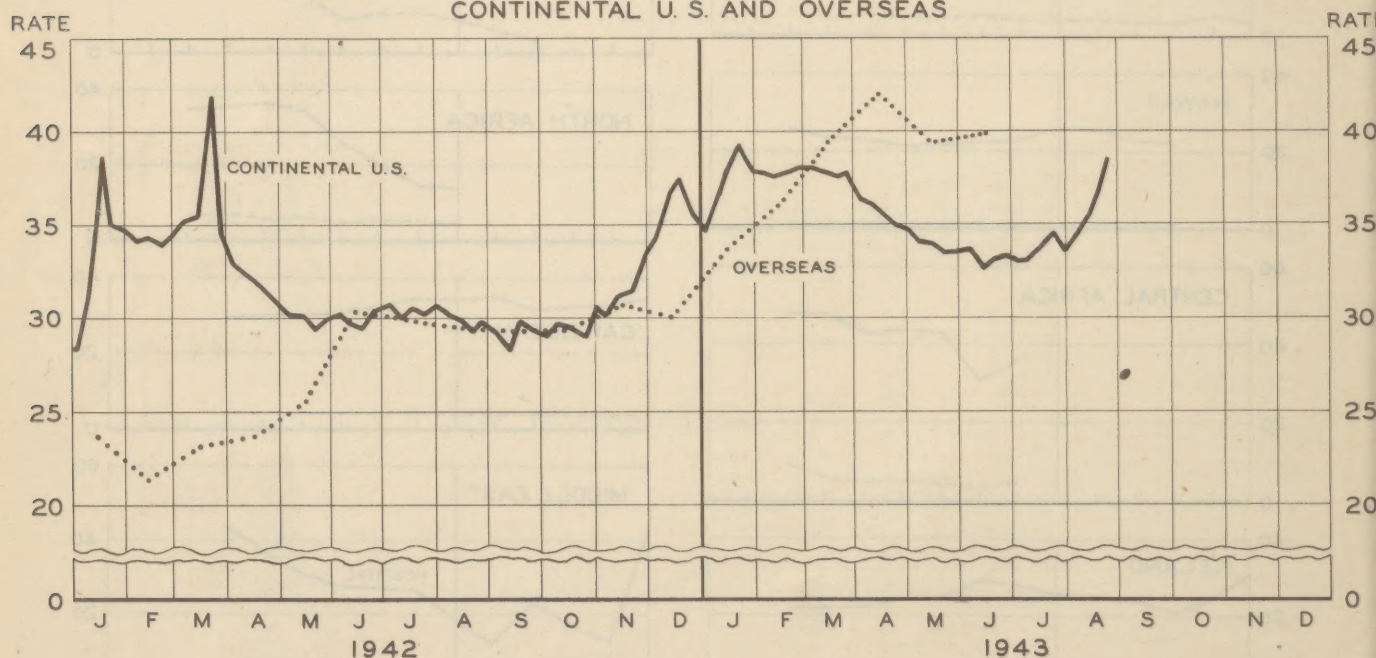
During August the noneffective rate for troops in the Continental U. S. climbed with a rapidity evinced only last fall and during January of this year. At that time the increasing incidence of respiratory infection served to explain the sharp increase, but no such ready explanation can be offered for the August increase. The steady rise appears to reflect the cumulative effect of a considerable number of factors.

There seems to be no question but that the advance in the noneffective rate is a real one. Comparison of the distribution of stations according to their rates for 31 July and 28 August reveals that there was a marked shift toward higher rates and that fewer stations were enjoying average or low rates on the latter date. On 31 July, 50 percent of the stations of 5,000 or more strength had rates of 26 or more. By 28 August the 50 percent point had risen to 29. Similarly, on the earlier date 90 percent of the stations had rates under 42, and on 28 August the 90 percent point had risen to 50.

Concomitant with the 15 percent increase in the noneffective rate between 31 July and 28 August, there has been an appreciable increase in the rate of admission for all diseases. The advance has been especially apparent in the First, Third, Fifth, and Eighth Service Commands. In the First and Fifth Service Commands the rate of admission for common respiratory diseases has advanced over this period, but elsewhere there has been little change. No other noteworthy changes in the reported disease picture during August have as yet come to light, but the future trend of admission and noneffective rates will be watched with interest.

The general level of the rate in recent months has been elevated by the receipt and hospitalization of thousands of evacuees from overseas. This factor may account for about two or three noneffectives per thousand men per day, and the sudden increase in evacuees during August may explain part of the swift rise. Another basic factor operating to elevate the average level of the rate is the shipment of troops abroad. Each contingent leaves behind its already ill members and others of questionable fitness. The overseas force is increasing and at an increasing rate. It has also been suggested that some part of the rise may be associated with the current increase in discharges for disability or with an increase in the average length of hospitalization.

NONEFFECTIVES PER THOUSAND MEN PER DAY
CONTINENTAL U. S. AND OVERSEAS



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DISEASE AND INJURY

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AVERAGE DAYS LOST PER ADMISSION, OVERSEAS COMMANDS

Estimates of average length of hospitalization are essential in the planning of hospital facilities and in the determination of evacuation policy. Estimates of total time lost per admission to hospital or quarters are important in calculating expected noneffective rates on the assumption of certain admission rates.

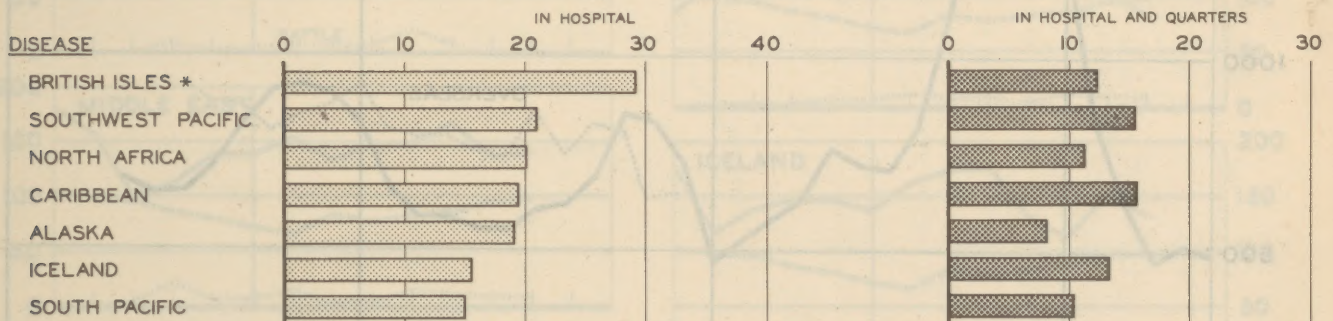
Entirely satisfactory estimates await the accumulation of refined data not yet in hand. However, approximations can be provided now and, with the exception of those for the British Isles, it is believed that they are accurate to within ten or fifteen percent. They were derived by averaging the experience of the first six or seven months of 1943, the actual observations being numbers of patients admitted and the numbers remaining under treatment. Serious error is present only if the volume of evacuated patients into a command has been appreciable during the interval covered, since such patients enter by transfer, not as direct admissions from command, and are included among patients remaining. It is believed that the estimates for the British Isles are excessive for this reason, for until the conclusion of the Tunisian campaign patients were evacuated from North Africa to the British Isles. The short bars for the South Pacific are considered to reflect the policy of rapid evacuation which has been practiced in that theater.

The charts give estimates for men admitted to hospital and for men admitted to hospital or quarters, with a separate breakdown for disease, nonbattle injury, and all causes (including battle injury). Satisfactory estimates for battle casualties could not be made from the preliminary information available. At one point, average days lost from all causes, and in both hospital and quarters, comparative data for the U. S. are available and have been added to the appropriate panel of the chart.

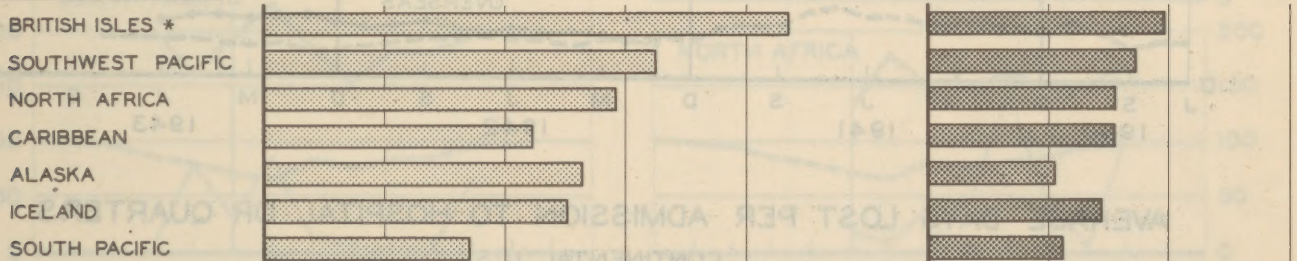
PRELIMINARY ESTIMATES OF DAYS LOST PER ADMISSION FOR DISEASE AND INJURY

OVERSEAS COMMANDS

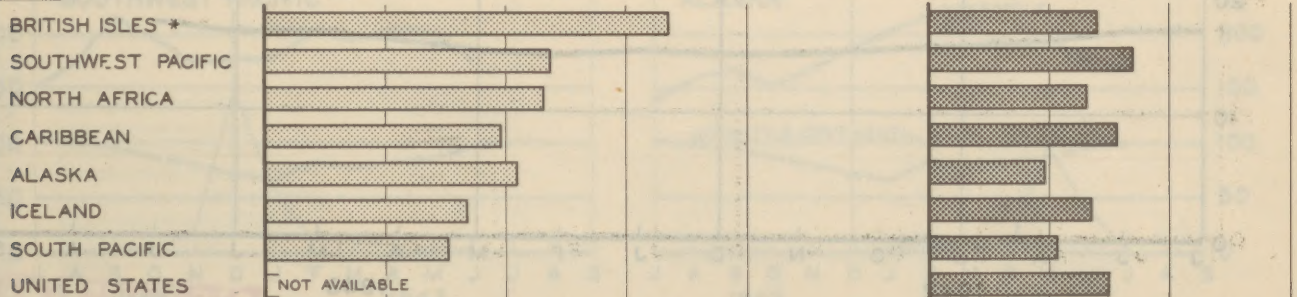
AVERAGE DAYS LOST



NON-BATTLE INJURY



TOTAL (INCLUDING BATTLE CASUALTIES)



* See text.

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DISEASE AND INJURY

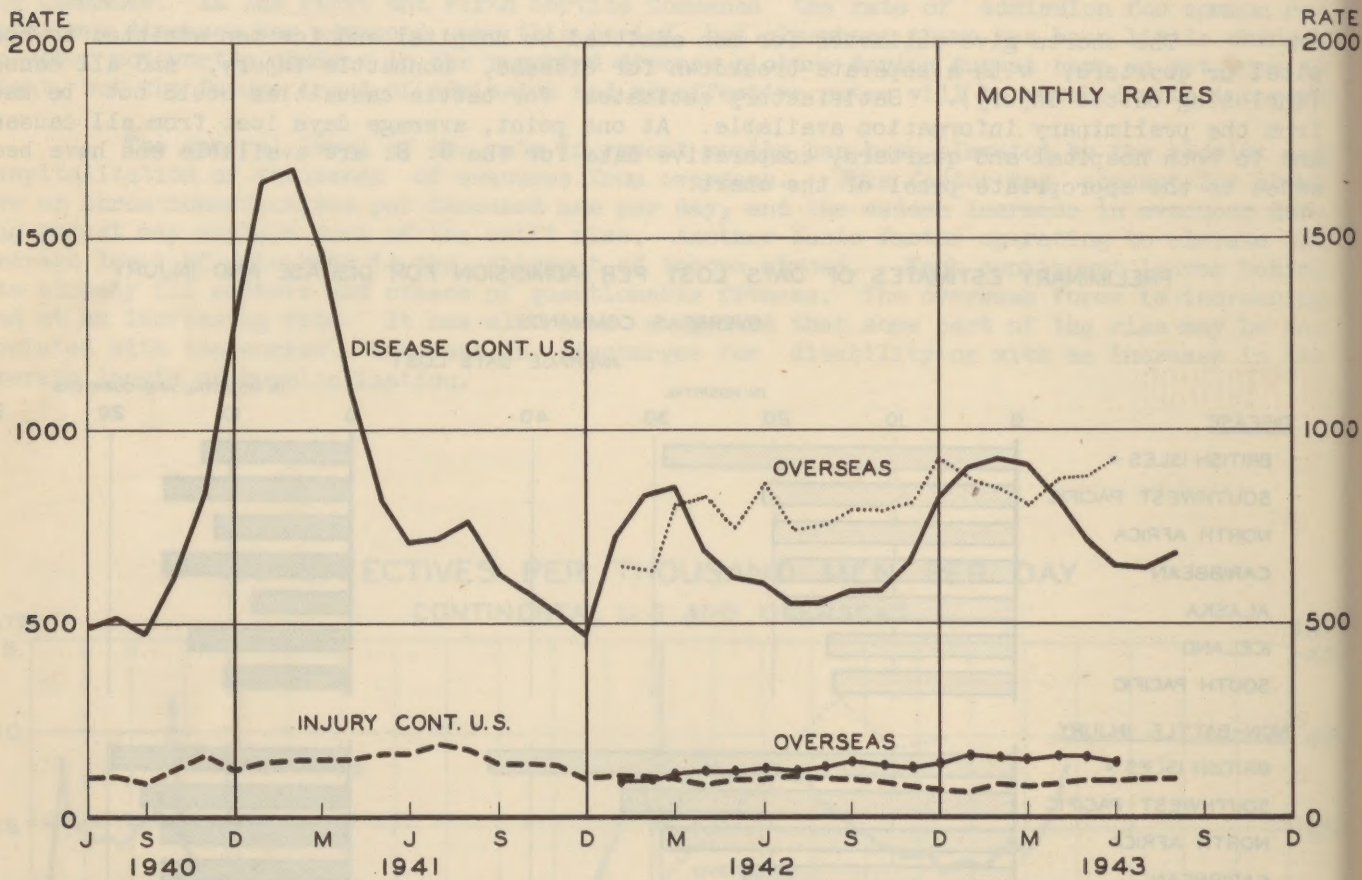
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DISEASE AND NONBATTLE INJURY

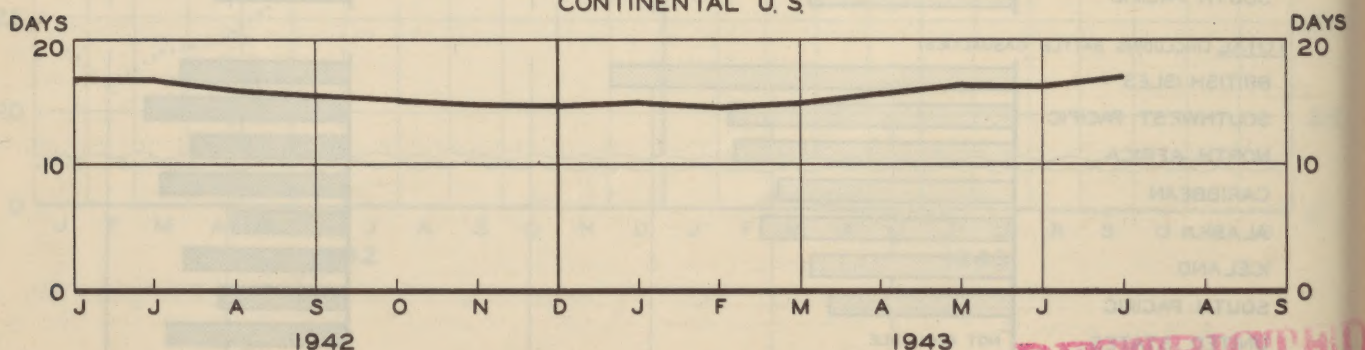
During August the preliminary admission rate for disease among troops in the Continental U. S. increased about 6 percent to reach 683 admissions per thousand men per year. The latest overseas rate available is that of 925 for June and is also subject to some revision on the basis of more complete reports. The rate of admission for nonbattle injury for the Continental U. S. was 97 during August, about the same as that which prevailed during July. The overseas rate declined slightly, however, from 151 to 140 admissions per thousand men per year.

The chart at the bottom of the page gives a series of estimates of the average number of days lost per admission (to hospital or quarters) in the Continental U. S. over the past year, with an allowance for the effect of evacuees from overseas. The estimates fluctuate about an average of 15.5 days, with some decline during the winter respiratory season when proportionately more admissions involve little loss of time.

DISEASE AND INJURY, ADMISSIONS PER THOUSAND MEN PER YEAR
CONTINENTAL U.S. AND OVERSEAS



AVERAGE DAYS LOST PER ADMISSION TO HOSPITAL OR QUARTERS
CONTINENTAL U. S.



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DISEASE AND INJURY

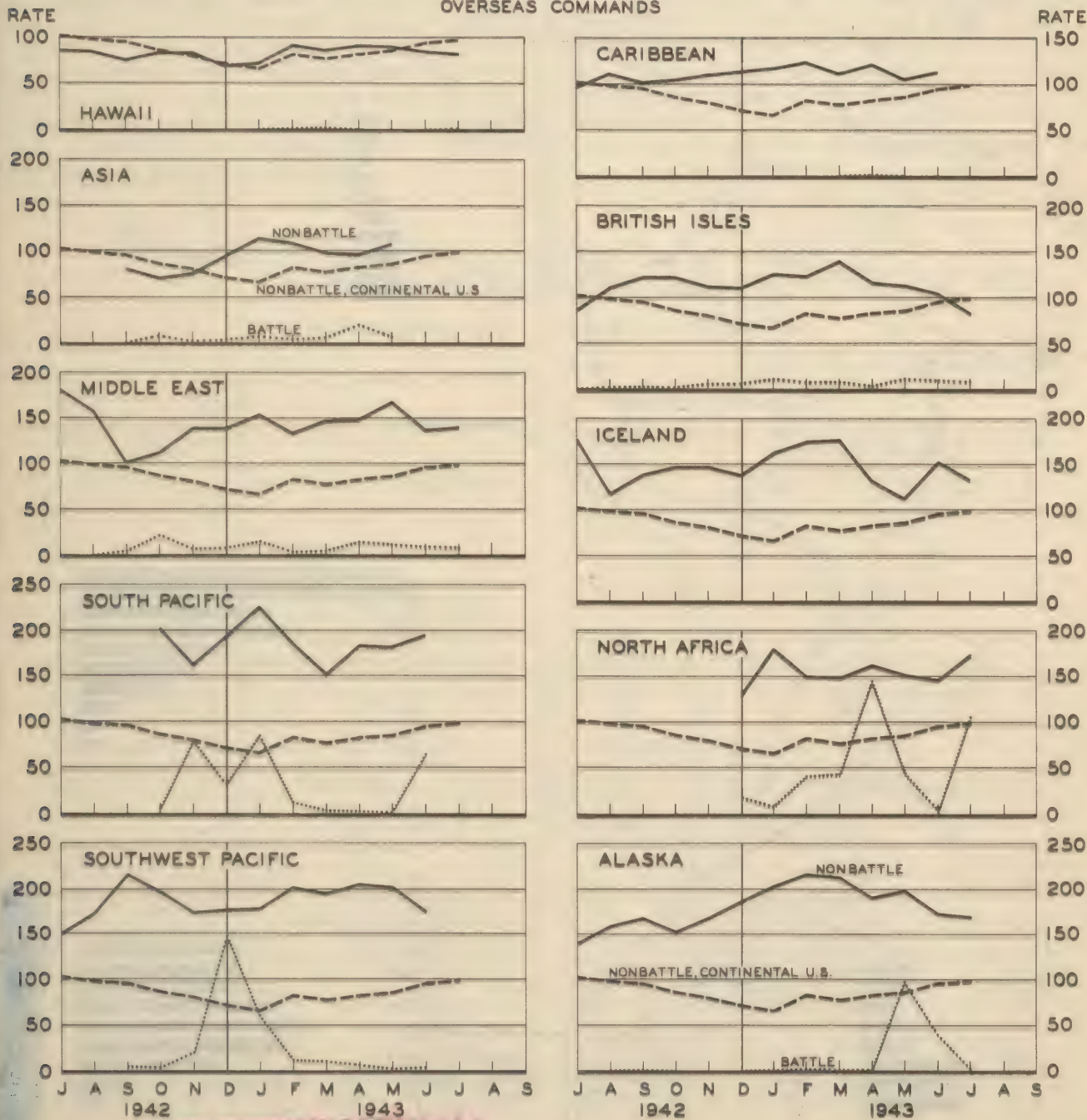
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INJURY RATES, OVERSEAS COMMANDS

Nonbattle injuries are about 50 percent more frequent overseas than in the U. S., but there are wide differences among commands. Only in North Africa and the Southwest Pacific has the incidence of battle injury attained the proportions recorded for nonbattle injury. In the South Pacific and Alaska, although lower than the rates for nonbattle injuries there, the incidence of battle injury has exceeded the U. S. rate for nonbattle injury at one or two points. On the average, battle injury has not yet become an outstanding cause of admission overseas.

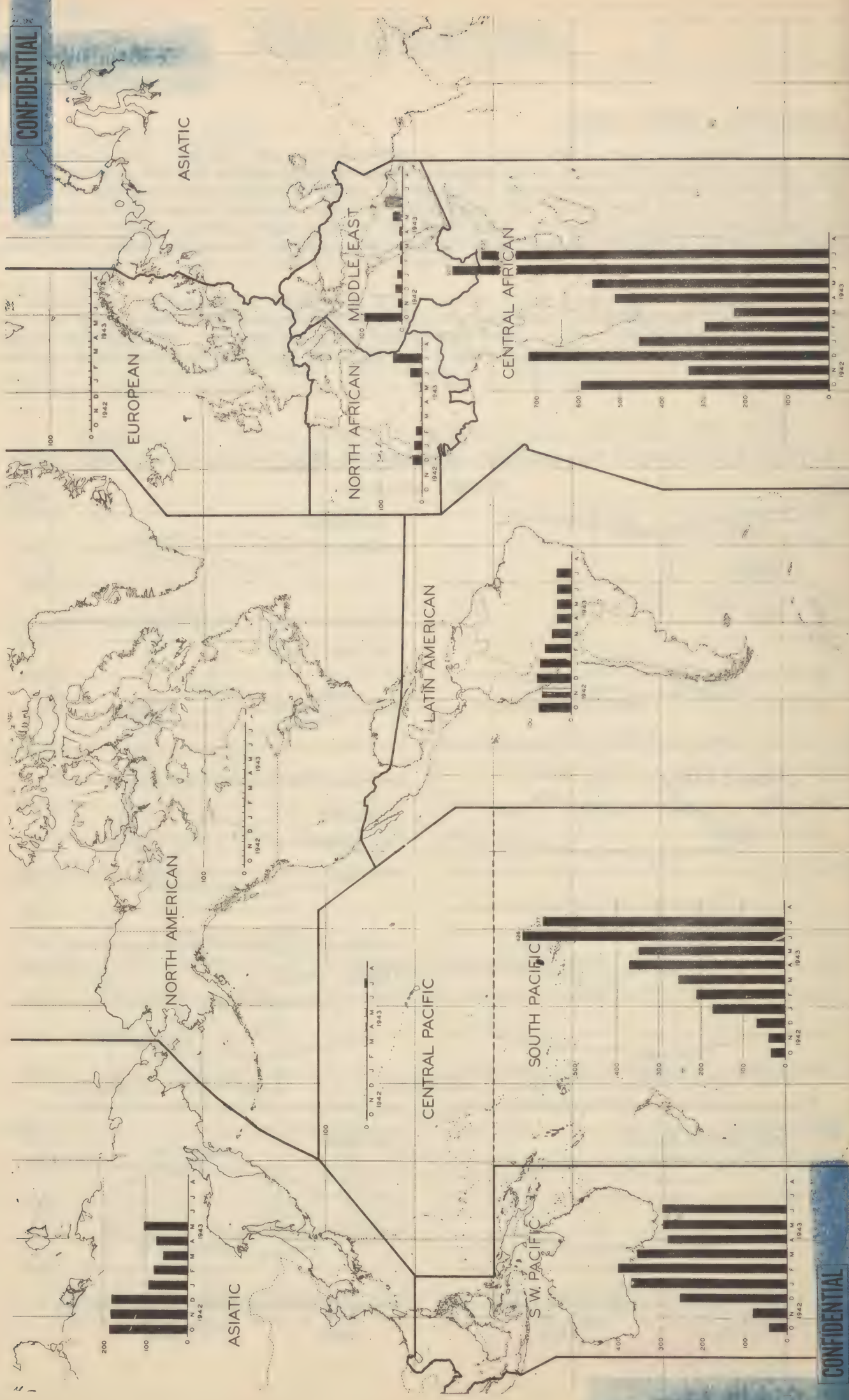
On each of the panel charts below, the U. S. average is plotted for comparison. In Hawaii, Asia, the Caribbean, and the British Isles the overseas rates are of the same relative magnitude as those for the U. S. In Alaska, the South Pacific, the Southwest Pacific, Iceland, North Africa, and the Middle East, on the other hand, the overseas rates are materially higher.

BATTLE AND NONBATTLE INJURY, ADMISSIONS PER THOUSAND MEN PER YEAR
OVERSEAS COMMANDS



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MALARIA, ADMISSIONS PER THOUSAND MEN PER YEAR



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DISEASE AND INJURY

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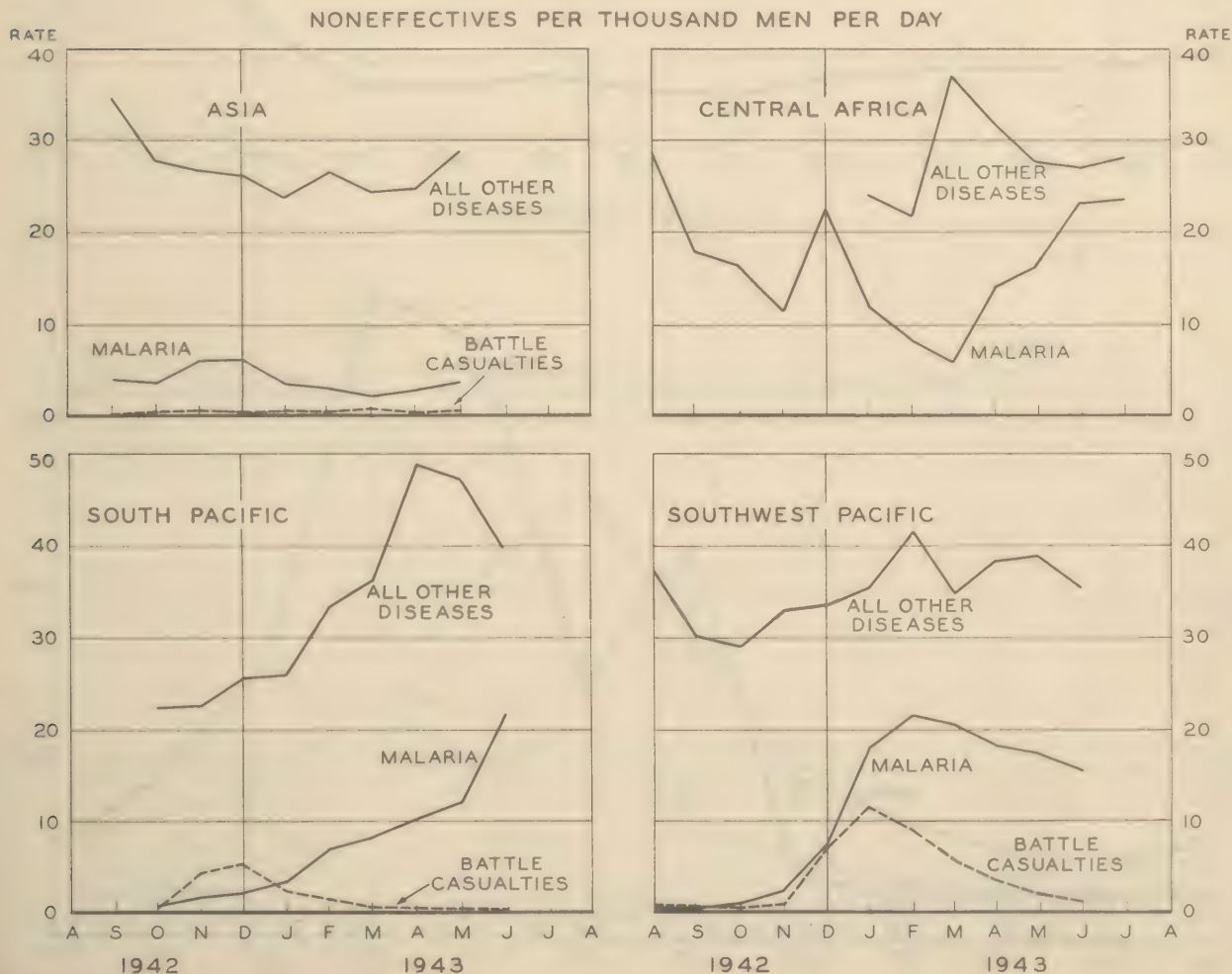
MALARIA OVERSEAS

Malaria continues to be the major medical problem faced by U. S. Army forces in tropical and subtropical regions. Its control is by no means assured, and yet extensive and important military operations must be undertaken in highly malarious areas. In such areas the problem is so serious as to deserve the highest consideration in planning military operations.

The most recent rates of admission for malaria have been added to the map on the adjoining page, the vertical bars representing the number of admissions per thousand men per year. Only diagnosed malaria is shown there. Allowances for the malaria escaping classification as such would elevate the rates appreciably. During June and July rates of 626 and 577 have been reported for the South Pacific, despite the intensive anti-malarial program which has been in effect there. In North Africa the rate rose sharply in June and during July it reached 69 admissions per thousand men per year. Since admissions for malaria are usually highest there in September and October, the rate has probably not yet reached its peak.

Admission rates do not tell the entire story. The noneffective rate, combining the effect of both the admission rate and the average number of days lost per admission, gives additional information and in succinct form. In the four areas having the highest admission rates, the noneffectiveness from malaria is appreciable. The accompanying chart shows the noneffective rates for malaria, for all other diseases, and for battle casualty in each area. In three of the four commands the noneffective rate from malaria has exceeded 20 per thousand men per day. Recently in the South and Southwest Pacific almost a third of the total noneffectiveness has been attributable to diagnosed malaria alone. In forward areas of combat, of course, the problem may be much more severe than is revealed by the average for a large theater like the Southwest Pacific.

MALARIA AS A CAUSE OF NONEFFECTIVENESS IN SELECTED MALARIOUS AREAS



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DISEASE AND INJURY

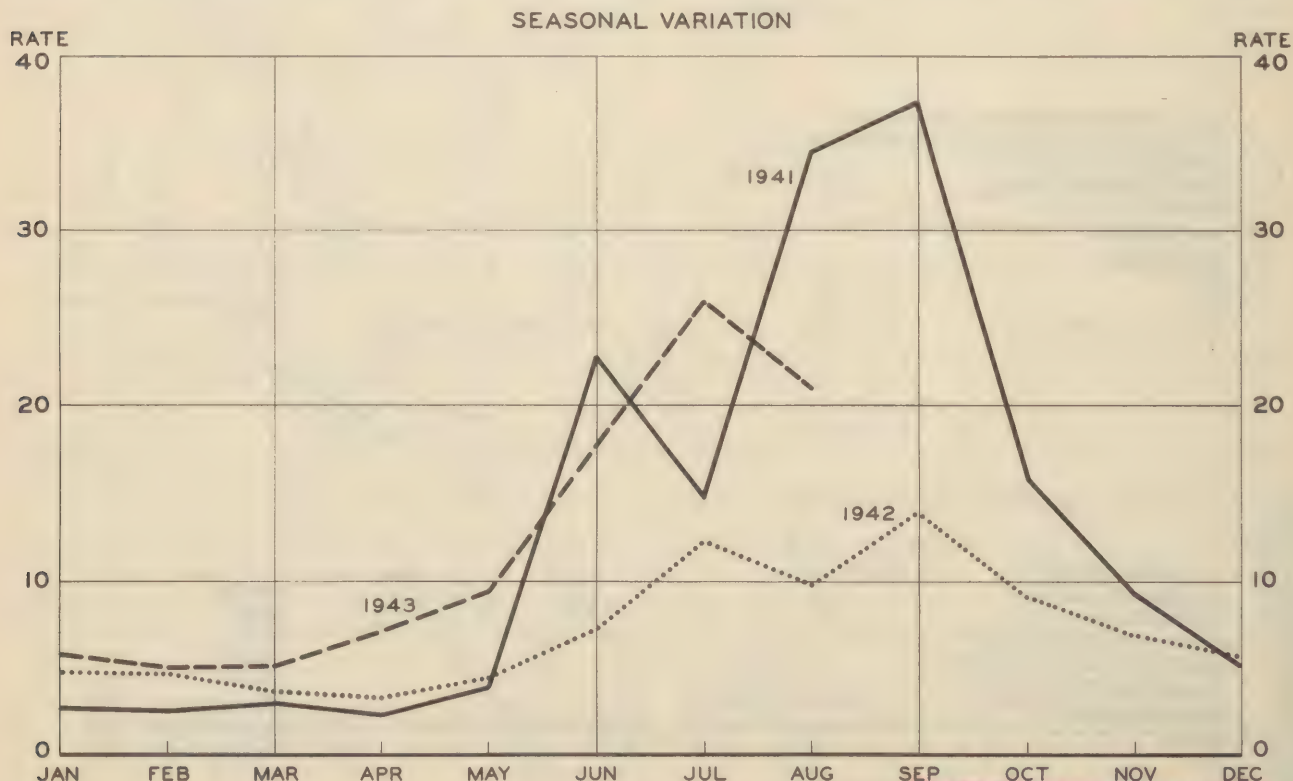
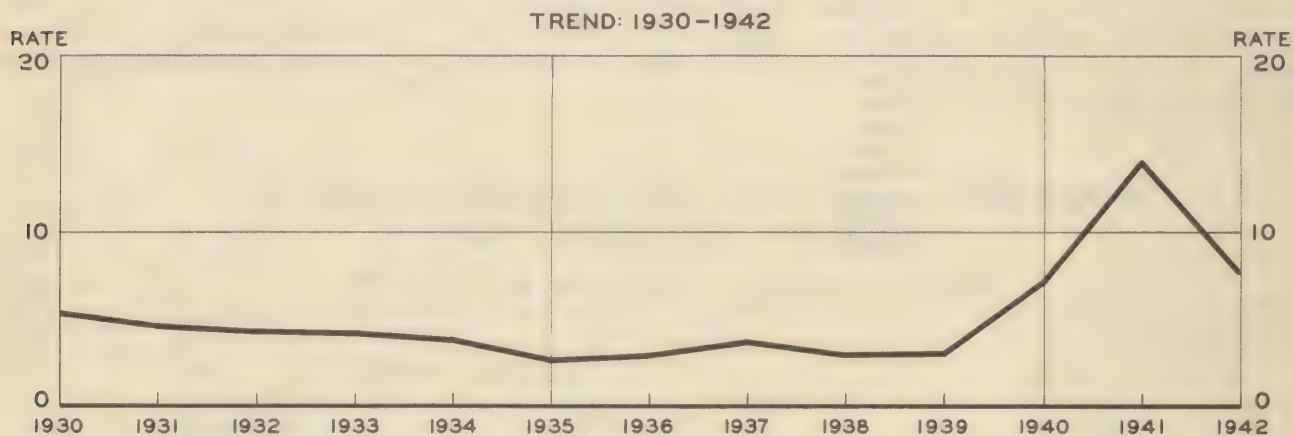
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DIARRHEA AND DYSENTERY, CONTINENTAL U. S.

The rapid mobilization and training of a new army as large as the present U. S. Army inevitably exposed troops to a somewhat less favorable sanitary environment than that enjoyed by a peace-time Army in permanent installations. Proven foes of effective military operations, diarrheal diseases have by no means broken the bounds of control but the experience has been sufficiently unfavorable to indicate a real failure to educate troops in the essentials of sanitation. The hazards to units stationed in the Continental U. S. may not seem especially grave, but this is not true of many important overseas theaters where they must be sent, and poor training will be reflected in the noneffective rates abroad.

Throughout the decade of the 1930's the average admission rate was 5 or less per thousand men per year as illustrated in the first chart below. In 1940 and 1941 it climbed sharply, the rate for 1941 being about three times the average of the decade. During 1942 the incidence was more favorable, but during 1943 the rates have, for the most part, exceeded those for 1941. However, the peak incidence in excess of 30 admissions per 1,000 men per year reached in August and September of 1941 has not yet been equalled in 1943.

DIARRHEA AND DYSENTERY, ADMISSIONS PER THOUSAND MEN PER YEAR
ARMY IN THE CONTINENTAL U. S.



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DISEASE AND INJURY

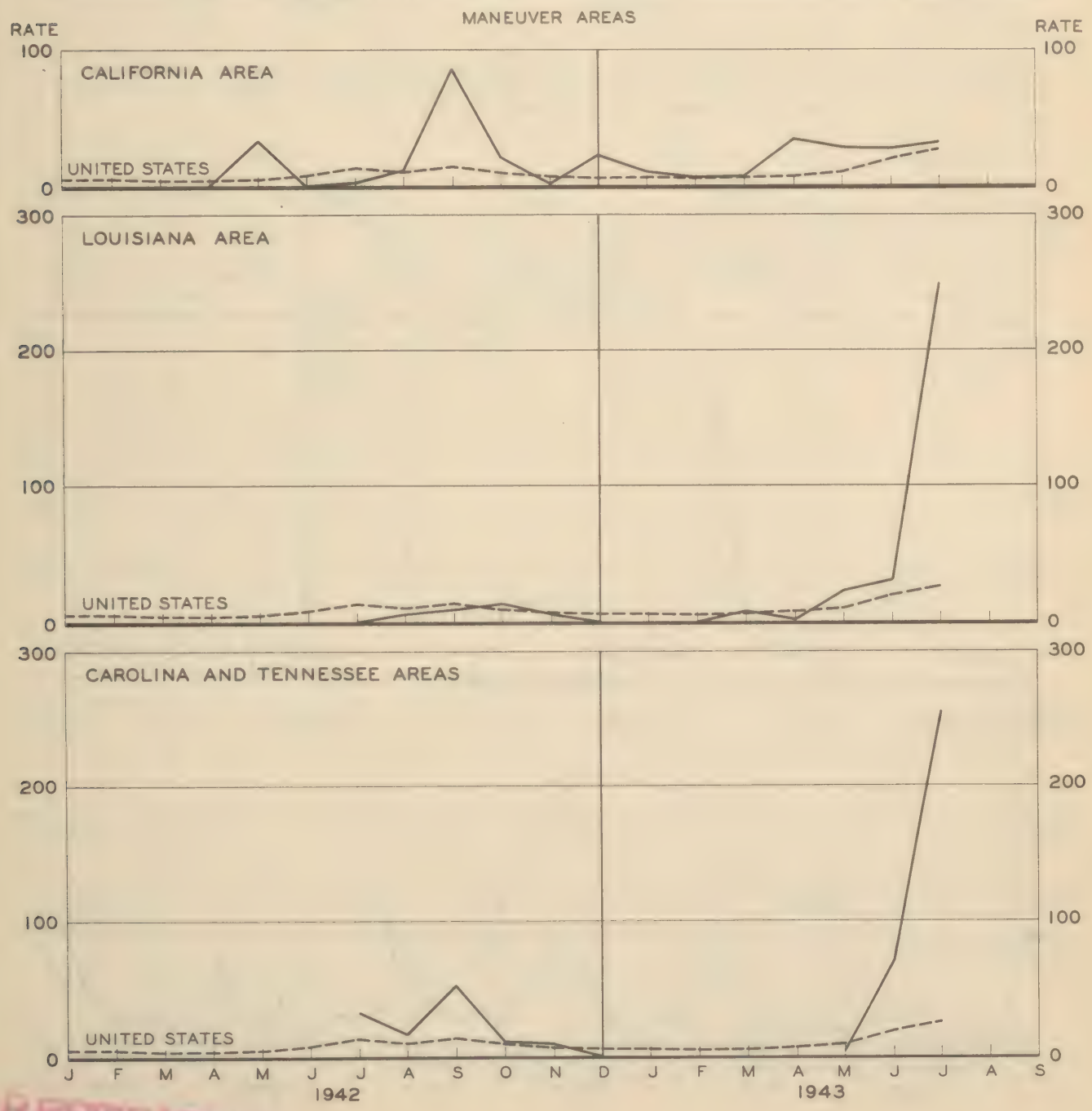
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DIARRHEA AND DYSENTERY, MANEUVER AREAS

While troops are in training in the Continental U. S. there is perhaps no better test of their sanitary discipline, and of their ability to provide sanitary facilities, than their experience on maneuvers. The evidence in hand suggests that much remains to be done by way of sanitary instruction, especially in imparting to troops an understanding and acceptance of the need for strict sanitary controls.

The average incidence of diarrheal disease among troops in the major maneuver areas during 1942 and 1943 is shown below against the average experience of the Continental U. S. The rates for maneuver areas climbed sharply in 1942 to a point many times that reported for all troops in the Continental U. S., and the experience this year has been even more unfavorable. Both the Louisiana and the Tennessee maneuver areas have reported excessively high rates of admission for June and July. Clearly the sanitary training of the troops maneuvering in these areas has been insufficient for their protection. Responsibility for sanitary training rests with commanding officers.

DIARRHEA AND DYSENTERY, ADMISSIONS PER THOUSAND MEN PER YEAR



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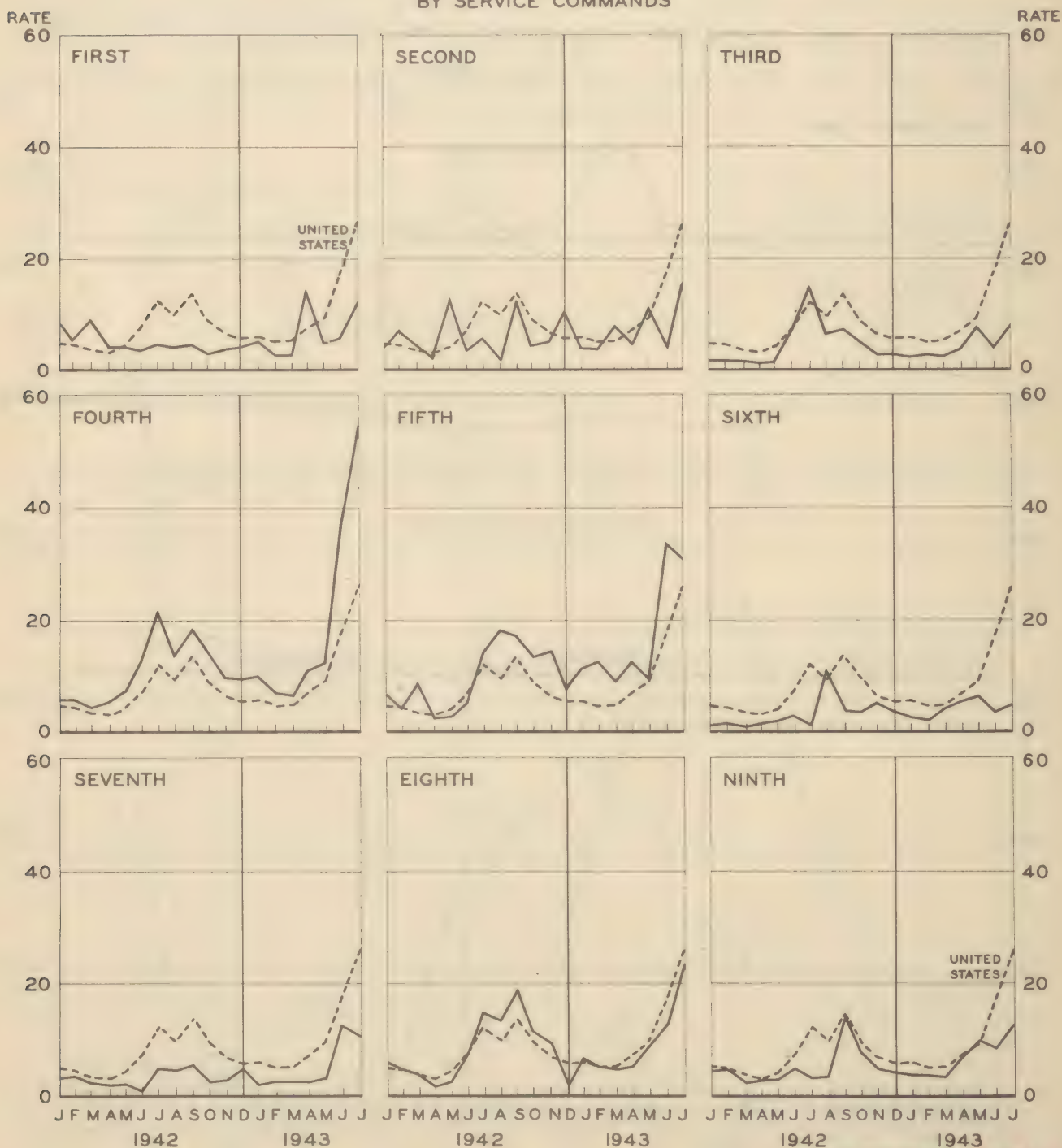
DIARRHEA AND DYSENTERY, SERVICE COMMANDS

The marked increase in Continental U. S. admissions for diarrhea and dysentery derives largely from the experience of troops in the Fourth, Fifth, and Eighth Service Commands. The accompanying panel charts for each service command permit a comparison with the total U. S. experience in each case. Although the Tennessee and Louisiana Maneuver Areas are responsible for some of the rise in the Fourth and Eighth Service Commands, the problem is evidently fairly general throughout these commands. Rates of the order of those shown for June, July, and August are compatible only with the interpretation that sanitary discipline among troops is deficient. This deficiency is the more serious because of the increased hazards to which these men are likely to be exposed if they are sent overseas.

DIARRHEA AND DYSENTERY, ADMISSIONS PER THOUSAND MEN PER YEAR

ARMY IN THE CONTINENTAL U.S.

BY SERVICE COMMANDS



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DISEASE AND INJURY

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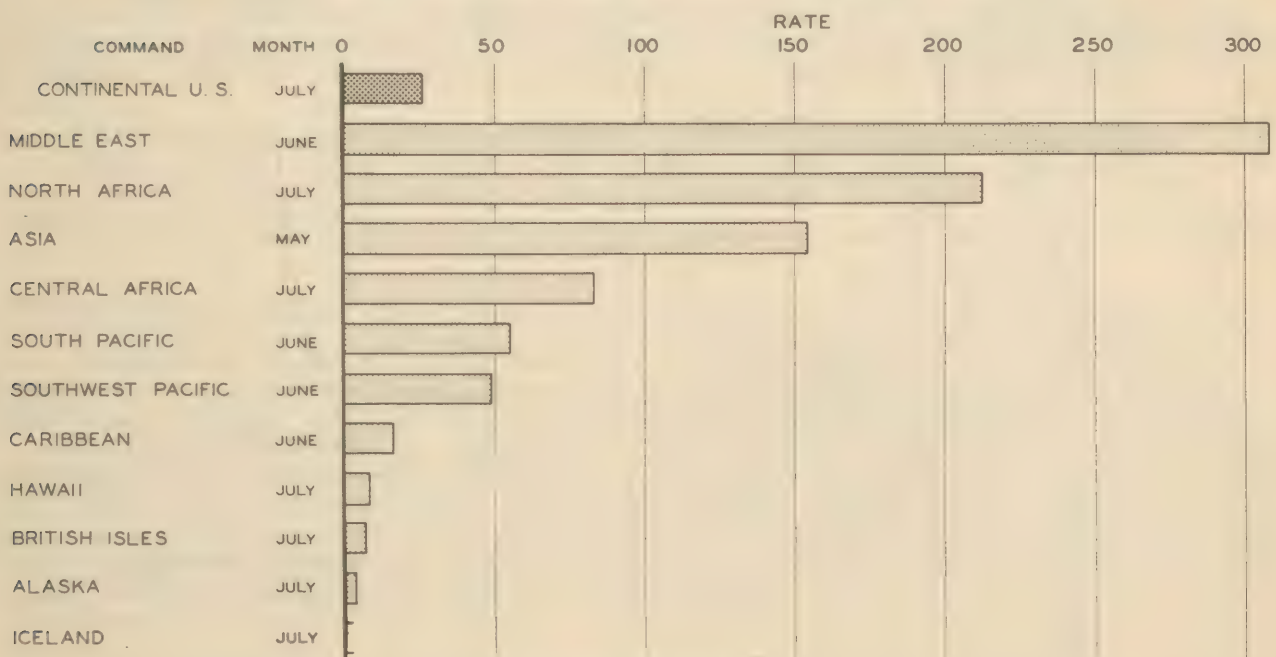
DIARRHEA AND DYSENTERY OVERSEAS

The incidence of certain outstanding causes of military noneffectiveness is more dependent upon sanitary discipline and training than upon the preventive measures which may be applied by medical personnel. These are especially malaria, venereal disease, and diarrheal disease. There is ample evidence that the sanitary discipline of the U. S. Army is not entirely satisfactory, and that commanding officers have not always been successful in averting widespread, if temporary, illness among their troops in consequence. The time for teaching sanitation is prior to exposure to serious hazard. The teaching and the enforcement of sanitary discipline are primarily command, not medical, functions.

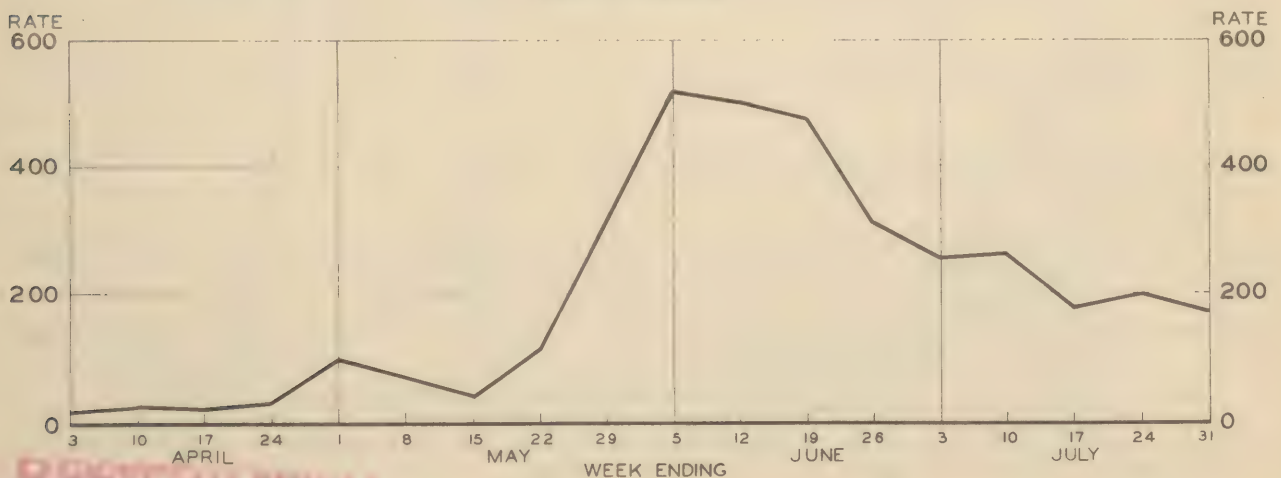
The most recent information available on the more important commands is shown below. The chance of infection depends greatly upon such temperature conditions as determine the breeding of flies and the multiplication of causative organisms, and thus tends to follow a certain seasonal pattern which is not uniform for all commands. The Middle East, North Africa, and Asia continue to present the most serious problem. Since particular interest attaches to the forces in the North African Theater of Operations, the second chart below shows the recent experience there. During May and June the incidence reached serious proportions. The annual rate of 515 which obtained during the week ending 5 June represents a weekly rate of about one percent.

DIARRHEA AND DYSENTERY, ADMISSIONS PER THOUSAND MEN PER YEAR

U. S. AND OVERSEAS COMMANDS, JUNE AND JULY 1943



NORTH AFRICA



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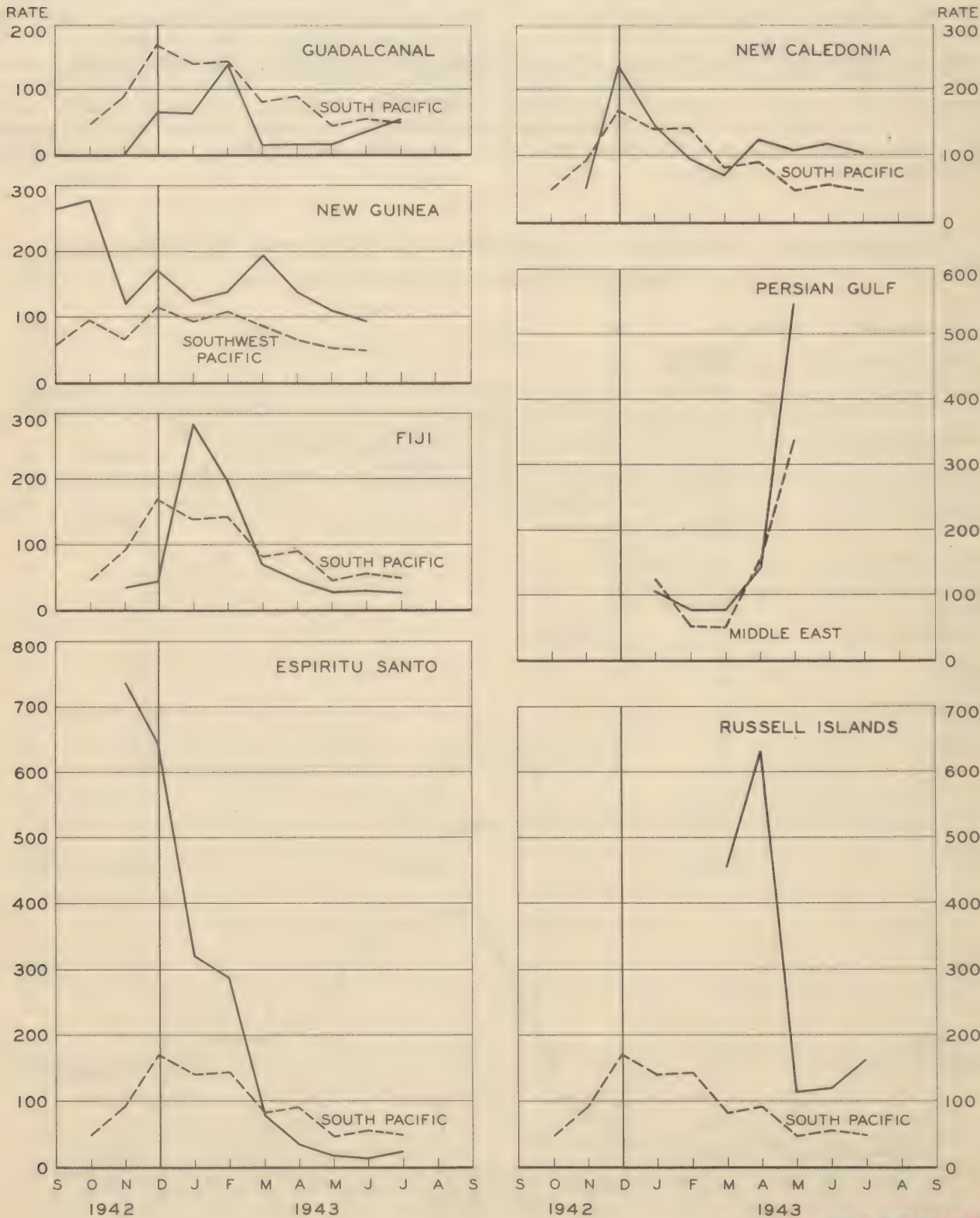
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DIARRHEA AND DYSENTERY OVERSEAS (Continued)

The prevalence of diarrheal disease in selected smaller commands is shown separately below against their respective theater totals. The initial rates for Espiritu Santo and Russell Islands were very high, suggestive of a breakdown of sanitation in the face of primitive living conditions and other environmental hazards.

DIARRHEA AND DYSENTERY, ADMISSIONS PER THOUSAND MEN PER YEAR

OVERSEAS BASES



DISEASE AND INJURY

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POLIOMYELITIS

Since 1933 the incidence of poliomyelitis among Army troops stationed in the Continental U. S. has been consistently low. With the recent increase in the size of the Army there have been proportionate increases in the admissions, so that the rate of admission has changed little. The table below details the admissions and rates of incidence for the years 1933-1942, and includes the 1943 experience through 11 September.

POLIOMYELITIS, ADMISSIONS PER THOUSAND MEN PER YEAR
ARMY IN THE CONTINENTAL U. S.

Year	Cases	Rate	Year	Cases	Rate	Year	Cases	Rate
1933	1	.01	1937	1	.01	1941	28	.02
1934	8	.04	1938	3	.02	1942	84	.02
1935	3	.02	1939	1	.01	1943	140	.03
1936	1	.01	1940	5	.02			

Until 1943 the Army was unaffected by epidemic outbreaks which appeared in the civilian population in various sections of the U. S. During the current year poliomyelitis is again epidemic in the civilian population, and the outbreaks in certain sections of the country have been accompanied by an increased incidence of the disease in military personnel stationed in these areas. These outbreaks in the civilian population have occurred principally in the Southwestern, Western, North Central, and Northeastern states. The U. S. Public Health Service has reported 5,939 cases among civilians through the week ending 4 September. Most of the cases have occurred in the states of Texas, Oklahoma, and California. In the Army a total of 140 cases had been reported through 11 September, the principal foci being in camps located in these three states, and the peak incidence being 22 cases for the week ending 21 August. The following table gives the weekly incidence throughout the year:

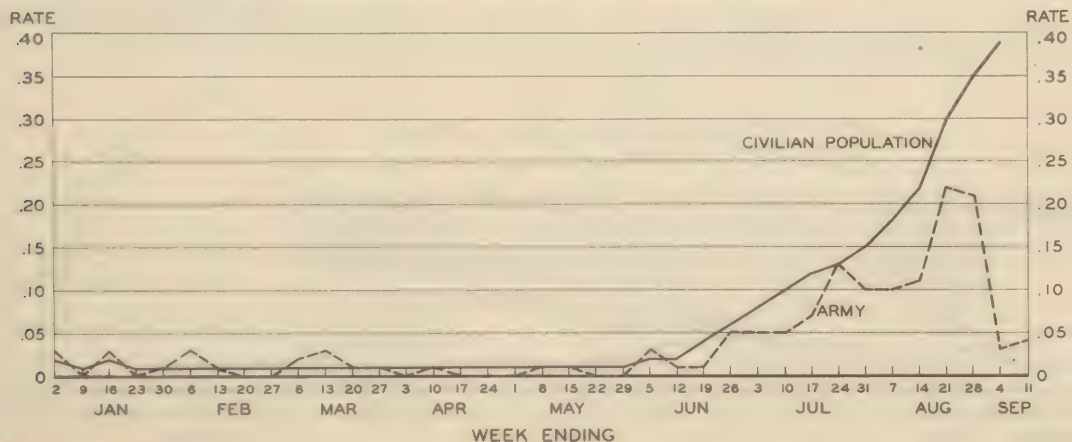
NUMBER OF CASES

Week	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2	3	2	0	0	3	5	10	3
2	0	1	3	1	1	1	5	11	4
3	2	0	1	0	1	1	7	22	
4	0	0	1	0	0	5	13	21	
5	1				0		10		

Comparison of the admission rates for the Army and for the civilian population indicates that the epidemic has been a general one, but that the Army rates have maintained a somewhat lower average level and have probably tapered off more quickly than now appears to be true of those for the civilian population. The accompanying chart depicts the course of the epidemic in rate form for both groups. The civilian rate for the week ending 4 September is the highest yet reported but preliminary radio reports (subject to correction and change) of the incidence for the Army for the weeks ending 4 and 11 September strongly suggest that the epidemic is waning among Army personnel. Among the 140 cases reported to date there have been four deaths, a case fatality rate of only 2.9 percent.

POLIOMYELITIS, ADMISSIONS PER THOUSAND MEN PER YEAR BY WEEKS

CIVILIAN POPULATION AND ARMY IN THE CONTINENTAL U. S.



DISEASE AND INJURY

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TUBERCULOSIS

As the Army has grown in size there has been a steady increase in the total number of recognized cases of tuberculosis. It is significant, however, that the rate of hospital admission and diagnosis of this disease has not risen appreciably during the period of mobilization, but has maintained the low level which obtained during the years immediately preceding the rapid expansion of the armed forces.

The first chart below compares the reported incidence of all forms of tuberculosis among white soldiers during World War I with similar rates for all troops stationed in the Continental U. S. during World War II. The strikingly low rate of the current period results in part from the decreased national incidence of tuberculosis and in part from the superior method of exclusion in effect today, that is, the chest X-ray examination.

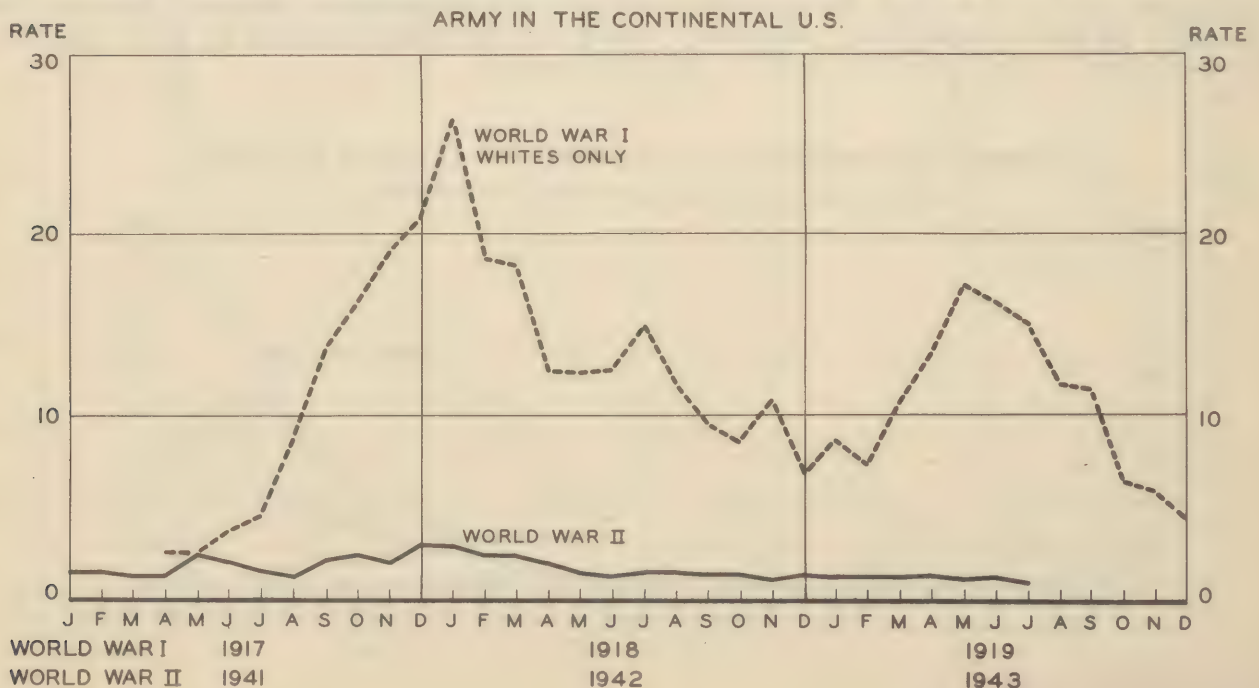
Since all inductees, except during the early months of the war, were X-rayed prior to acceptance, the origin of cases discovered in the service has been a matter of serious concern. It has become evident that the screening procedure has not been perfect; cases of tuberculosis which would have been readily detected upon X-ray examination under ideal conditions have escaped discovery in the haste and strain of mass examinations. Estimates of the extent of error have been made by The Surgeon General in two ways:

1. A sample of 50,000 induction films of accepted men has been re-read. This shows that most induction stations have overlooked a few cases, but relatively low rates of error have been discovered for the First, Sixth, and Seventh Service Commands.

2. An analysis has been made of the histories of 340 inducted men later discovered to have tuberculosis and sent to Fitzsimons General Hospital in the period 1 January to 30 June for observation and treatment. These men had entered the Army through 81 induction stations; each of 20 stations had physically qualified more than 5 of the men; two of these stations had accepted 29, or 8.5 percent of the total group studied. Review of those induction films available showed that in most instances the disease had existed at the time of induction.

It is a striking and salutary fact that most of the tuberculous individuals among the 340 admitted into the Army through error were discovered shortly after admission. The first chart on the next page gives the distribution according to length of service for the 340 tuberculous patients included in the special study. One-fourth of the patients were

TUBERCULOSIS, ADMISSIONS PER THOUSAND MEN PER YEAR



DISEASE AND INJURY

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TUBERCULOSIS (Continued)

diagnosed as tuberculous within one month of service, and 75 percent within six months after induction. The fact that the 315 tuberculous patients recognized as such in the United States were diagnosed in 129 separate hospitals constitutes cogent evidence of an alert attitude on the part of physicians in Army hospitals. About 30 percent of this group of 340 patients admitted to Fitzsimons General Hospital were found to have moderately advanced pulmonary tuberculosis. In another 20 percent the tuberculosis was diagnosed as far advanced. A classification of the patients is made in the chart below.

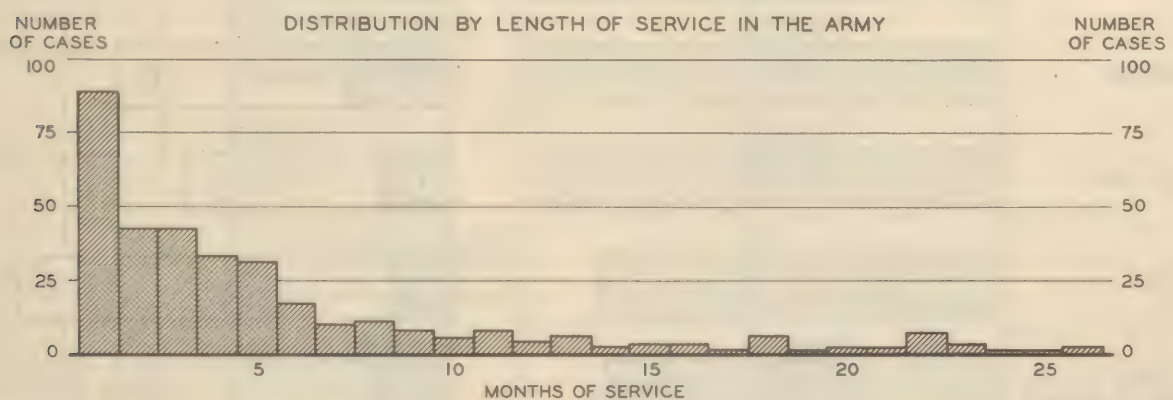
The disposition of tuberculous patients has varied according to Army regulations in effect in different periods. Prior to April 1943, tuberculous patients were discharged to the Veterans Administration if their illness was adjudged to have been contracted in line of duty. Other tuberculous patients were held in Army hospitals for appropriate treatment until they had derived the apparent maximum benefit from such hospitalization. The majority of such cases were sent from the hospitals of diagnosis to Fitzsimons General Hospital for this purpose, where they received carefully considered treatment at the hands of specialists in tuberculosis.

In April 1943, by Congressional action, soldiers discharged for disability with a diagnosis of tuberculosis became entitled to hospitalization at the facilities of the Veterans Administration, regardless of their status with respect to line of duty. This change in procedure is reflected in the tuberculosis census at Fitzsimons General Hospital which was 903 on 1 January 1943, and stood at 540 on 26 August.

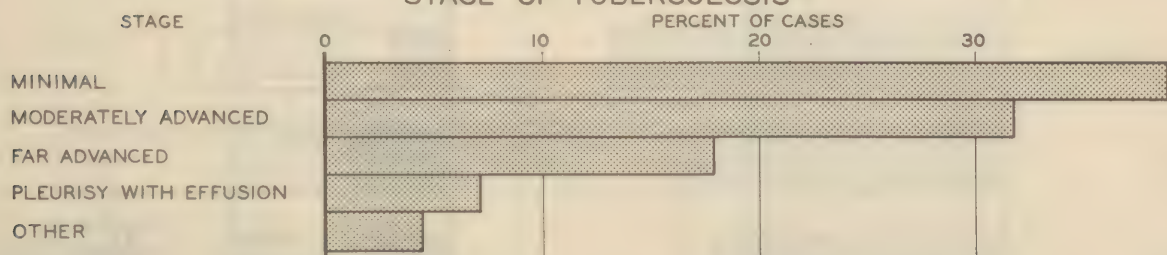
The number of cases received by the Veterans Administration for disposition and care has risen steadily since August 1940 in rather direct relation to the size of the Army. The total number of claims filed for disability associated with pulmonary tuberculosis had risen to 2,892 by the end of July. Of this number 1,643 claims were adjudicated by the Veterans Administration as entitling the claimant to a pension.

The Veterans Administration has 13 hospitals devoted to the care of tuberculosis, as well as 28 general hospitals in which some beds are available for tuberculous patients. As of 31 July there were 3,657 tuberculous patients in the special tuberculosis hospitals and 1,332 in the general hospitals. Of the number in the special tuberculosis hospitals, 30 percent were patients who had seen service in World War II. In 70 percent of these the tuberculosis had been adjudged "service connected".

INDUCTEES DIAGNOSED AS TUBERCULOUS *



STAGE OF TUBERCULOSIS *



* Sample of 340 cases sent to Fitzsimons General Hospital.

DISEASE AND INJURY

DENTAL TREATMENT OVERSEAS

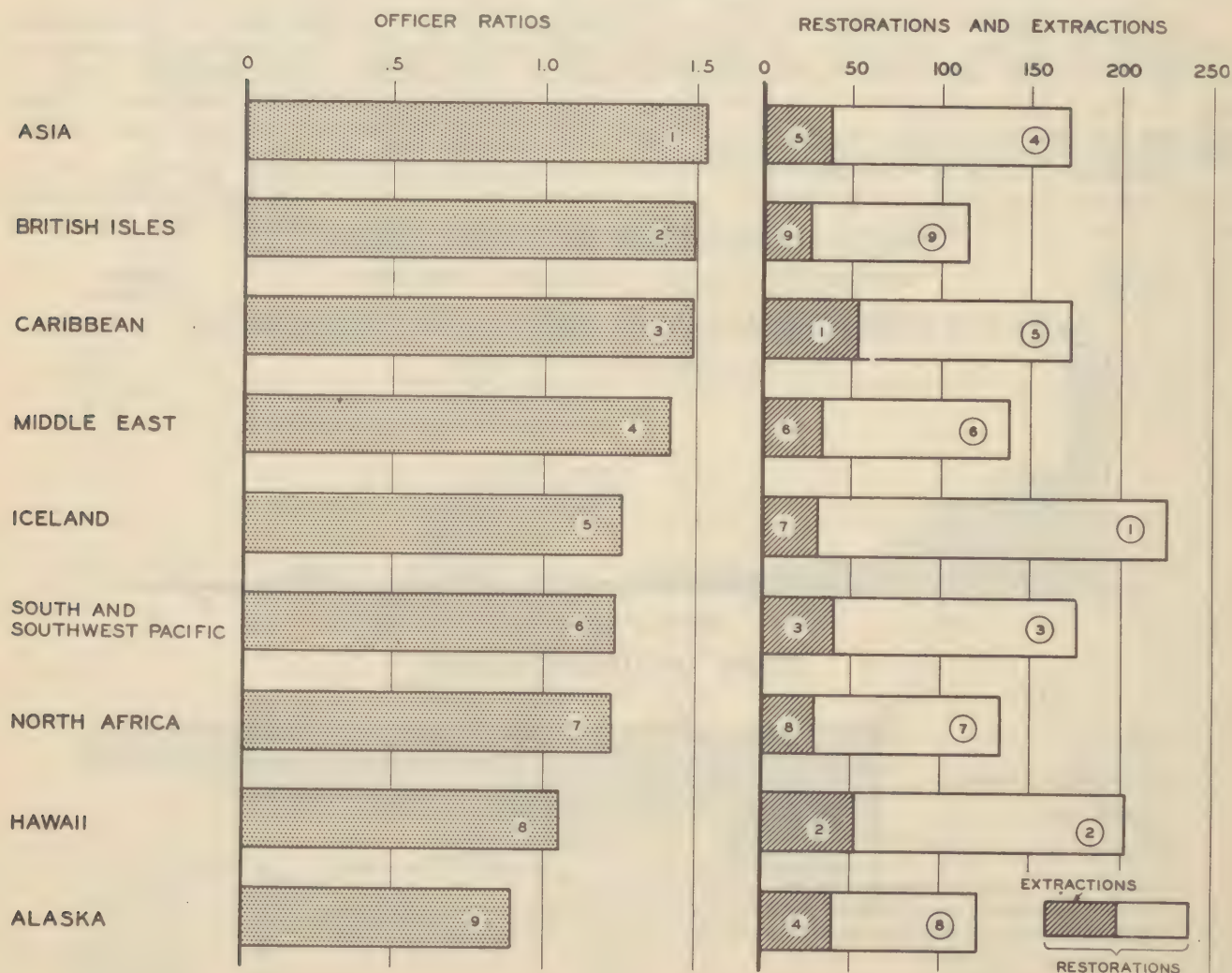
There have recently been derived estimates of the incidence of dental treatment in various overseas theaters and commands. Because the relative amount of dental work accomplished should depend in part upon the ratio of dental officers to men, the first panel of the chart below ranks the commands shown there according to the average number of dental officers per 1,000 men. Apart from special circumstances associated with the activity of the theater, the training program, availability of supplies, and the geographical distribution of troops in relation to dental officers, the ranking which holds for the officer ratio should be the same as that for any particular dental accomplishment.

In Asia there was an average of 1.53 dental officers per thousand men during April, May, and June. In the British Isles the ratio was 1.49. Alaska had the lowest with 0.89 dental officers per thousand strength. For all overseas troops the average for the month of June was 1.2. In general, overseas commands having many fixed installations and a high ratio of service troops also have high ratios of dental officers per thousand strength.

The second panel of the chart presents the average number of restorations and extractions per 1,000 men per month during the three-month period. The numbers to the right of the bars denote the ranking with respect to the rates for restoration. Thus the British Isles was ninth in rank despite its favored position with respect to dental officers. Iceland reported the highest rate of restoration, although its officer ratio ranked fifth. Similarly Hawaii, with only 1.05 dental officers per thousand men, reported very high rates of restoration and extraction among troops stationed there.

DENTAL OFFICERS PER THOUSAND MEN AND DENTAL TREATMENTS PER THOUSAND MEN PER MONTH

APRIL—JUNE 1943



DENTAL TREATMENT OVERSEAS (Continued)

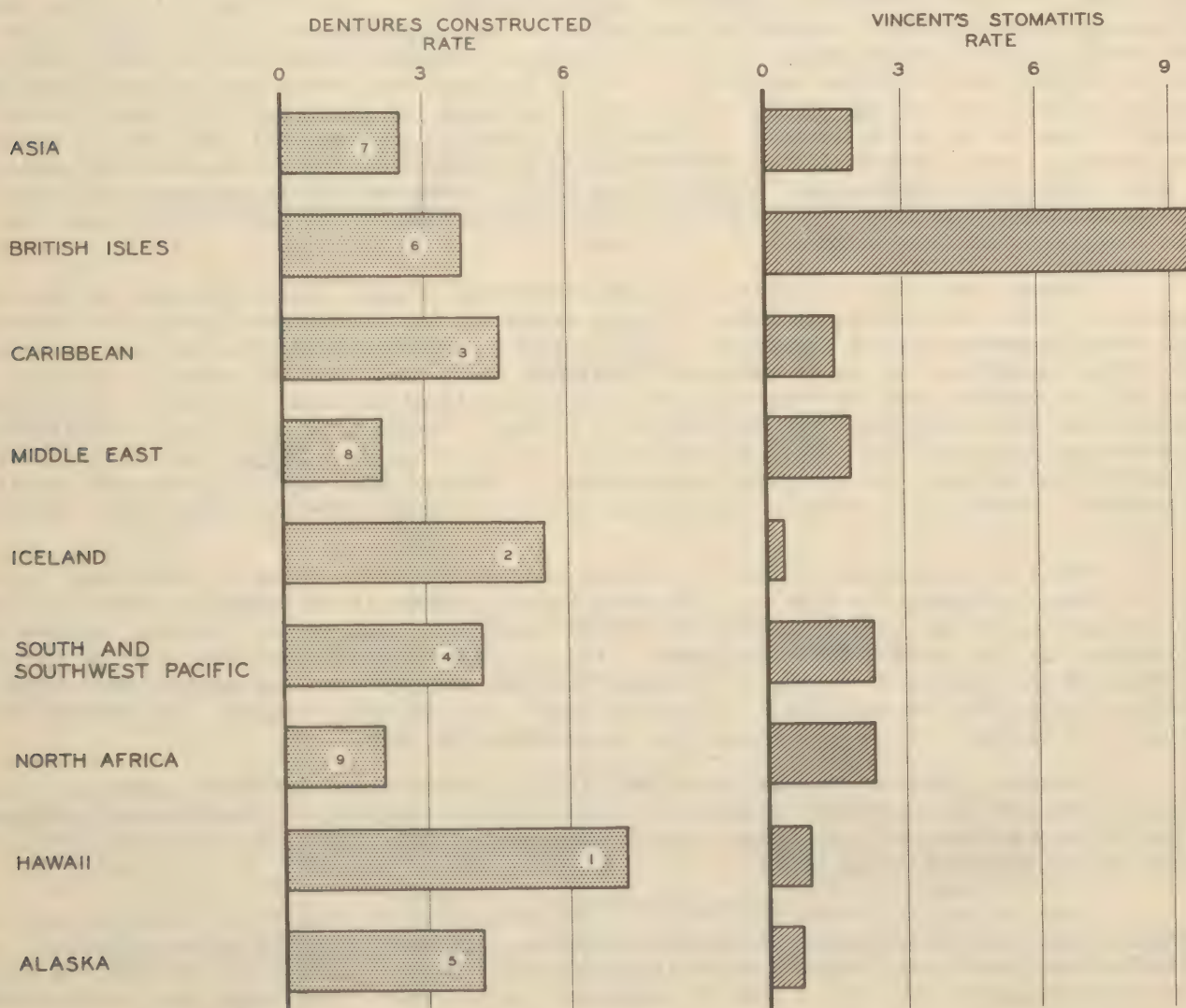
Rates for denture construction in each command appear in the first panel below, the order being that of the previous page and the numerals at the side giving the ranking with respect to denture construction. Again Iceland and Hawaii have rates indicative of very extensive dental work, although their officer ratios are low. Reports of denture construction in the British Isles are somewhat less favorable, as is true of the apparent volume of extractions and restorations.

The general averages for dental work in June are 149 restorations, 41 extractions, and 3.6 dentures per 1,000 men per month overseas.

During 1942 and 1943 Vincent's Stomatitis, or "trenchmouth", has been maintained at a remarkably low level in the U. S. The British Isles constitute the only exception to an otherwise highly favorable experience overseas as well. In April the incidence there increased to 10.8 cases per 1,000 men per month, or 130 per 1,000 men per year. By June it had fallen to 8.4, but the average is 9.4 for the three months and is many times the incidence reported from other commands. The troops stationed in the British Isles have more opportunity for contact with civilian sources of infection than do U. S. Army forces in some other commands. An incidence of one percent is no cause for alarm, however. The otherwise generally favorable picture with respect to a potentially epidemic and disabling disease derives chiefly from the practice of good oral hygiene and from adequate diet.

DENTURE CONSTRUCTION AND INCIDENCE OF VINCENT'S STOMATITIS
PER THOUSAND MEN PER MONTH FOR OVERSEAS TROOPS

APRIL—JUNE 1943



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DISEASE AND INJURY

RECENT PROGRESS IN THE TREATMENT OF VENEREAL DISEASE

In 1940 each thousand men under arms in the United States Army lost a total of 1278 days from duty because of venereal disease; the corresponding figure for 1941 is 886. Current rates for troops within the Continental U. S. are at a level of approximately 400 days lost per 1,000 men per year, and these rates would be materially lower were the days lost by inductees with venereal disease excluded.

This decline in non-effective rates from venereal disease is due partly to an active preventive program, both within camps and among civilian population, but more largely, perhaps, it is a reflection of the great advances that have been made in the treatment of these diseases.

A few years ago the treatment of gonorrhea was time-consuming, six to eight weeks often being required to effect a cure. Today, gonorrhea can be cured within a week by the use of the sulfa drugs and penicillin. Chancroid, too, responds well to the sulfa drugs, and the treatment of syphilis has become safer and less prolonged.

During the years 1934 to 1937, inclusive, individuals with gonorrhea were hospitalized on the average of over 50 days each. Introduction of the sulfa drugs in the treatment of gonorrhea in 1938 was accompanied by a decline in the average days of hospitalization to 45 days in 1939 and 35 days in 1940. Provisional data indicate that the average days lost per case is now under 25. At the same time the frequency of complications of gonorrhea has shown a marked decrease. In 1937, 28 percent of individuals with gonorrhea developed some disabling complication. This percentage dropped to 12 percent in 1939 and 8 percent in 1940. Current data indicate that less than 2 percent of infected individuals now develop complications.

Of each 100 men with gonorrhea, approximately 70 respond within 2 to 5 days to the first course of sulfathiazole. Another 10 respond to a second course of the sulfa drug, while about 20 require more prolonged and complex treatment. Heretofore, this latter group was treated by artificially elevating the patient's body temperature to 105 - 106° F for a continuous period of eight hours, a form of treatment somewhat dangerous in itself and requiring special facilities and personnel. Within the past two months studies have been carried out in the Army on the effect of penicillin in cases of gonorrhea which have failed to respond to one of the sulfa drugs. Of over 600 such cases treated, all but about 5 percent were promptly cured by penicillin. Those failing to respond to the first course of penicillin were cured with a subsequent course of the drug. When penicillin becomes freely available it is anticipated that virtually all cases of gonorrhea can be cured within less than a week.

Several important scientific and administrative changes have been made in the management of individuals with syphilis. First, mapharsen has been substituted for the more toxic neoarsphenamine in the treatment of the disease. This has led to a substantial reduction in the proportion of major and minor treatment reactions, and has made it possible to carry out the greater part of treatment while the individual is on active duty. Second, the treatment has been shortened and intensified, so that treatment is now usually completed in six months as compared with 12 or 18 months required previously. Third, the initial period of hospitalization has been materially shortened. Patients with early infectious syphilis are rendered noninfectious within 48 hours and can be discharged to duty within 7 to 10 days, as a rule.

While it is desired further to shorten the period during which an individual is required to take treatment for syphilis, the Army has not deemed it advisable to adopt for routine use any one of the very intensive methods of treatment, such as the five-day intravenous drip method, or the one-day fever treatment. All of these intensive methods thus far devised save time at the expense of safety. Both the five-day and the one-day methods have shown a mortality rate from treatment alone of one in about 250 patients treated, as compared with virtually no deaths with the routine method now used by the Army.

However, because of the potential value of abbreviated treatment schemes, especially in theaters of operation, clinical studies on a modification of the five-day treatment are now being conducted at Fort Bragg, North Carolina, with a view to determining the adaptability of the method to Army needs.

There is one important conclusion to be drawn from the significant advances recently made in the medical treatment of venereal diseases. Any measure which deters affected individuals from immediately seeking authorized medical care operates against the best interest of the individual and the Army. Loss of pay, demotion in grade, and other punitive measures serve to promote concealment of disease and to reduce the chance of prompt cure when treatment is eventually instituted.

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DISEASE AND INJURY

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VENEREAL DISEASE, U. S. AND OVERSEAS

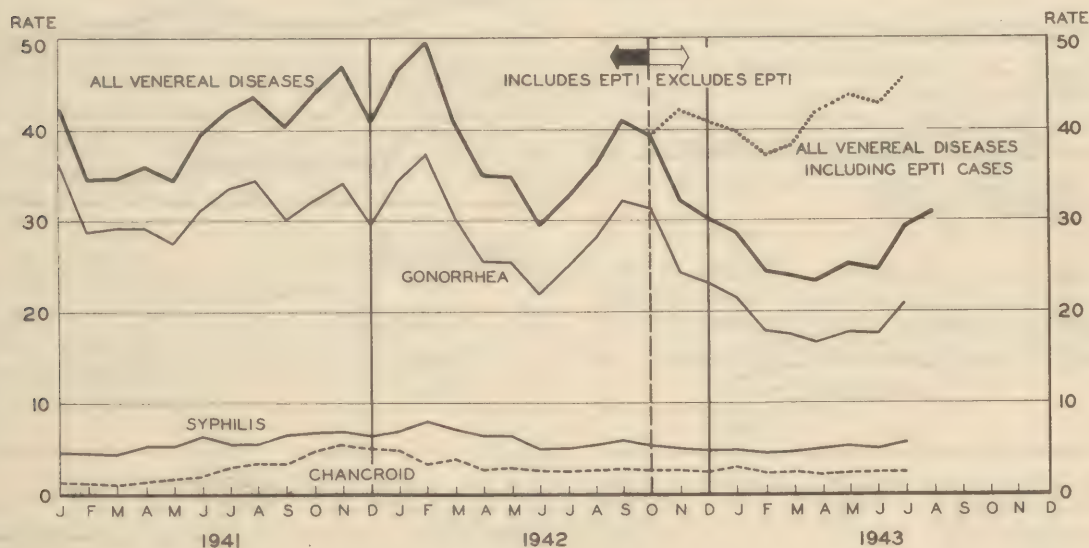
The preliminary admission rate for venereal disease in the Continental U. S., corrected to exclude cases infected prior to admission into the Army, increased slightly during August to 30.4 admissions per thousand men per year. The total uncorrected rate and the corrected rates for gonorrhea and syphilis are not yet available for inclusion in the chart below.

Information is now available on the trend of venereal infection overseas. The second chart is drawn to facilitate comparison with that for the Continental U. S. The problem of exposure prior to entrance into the Army does not apply to the overseas experience, but it is not yet possible to correct the U. S. rates prior to October 1942.

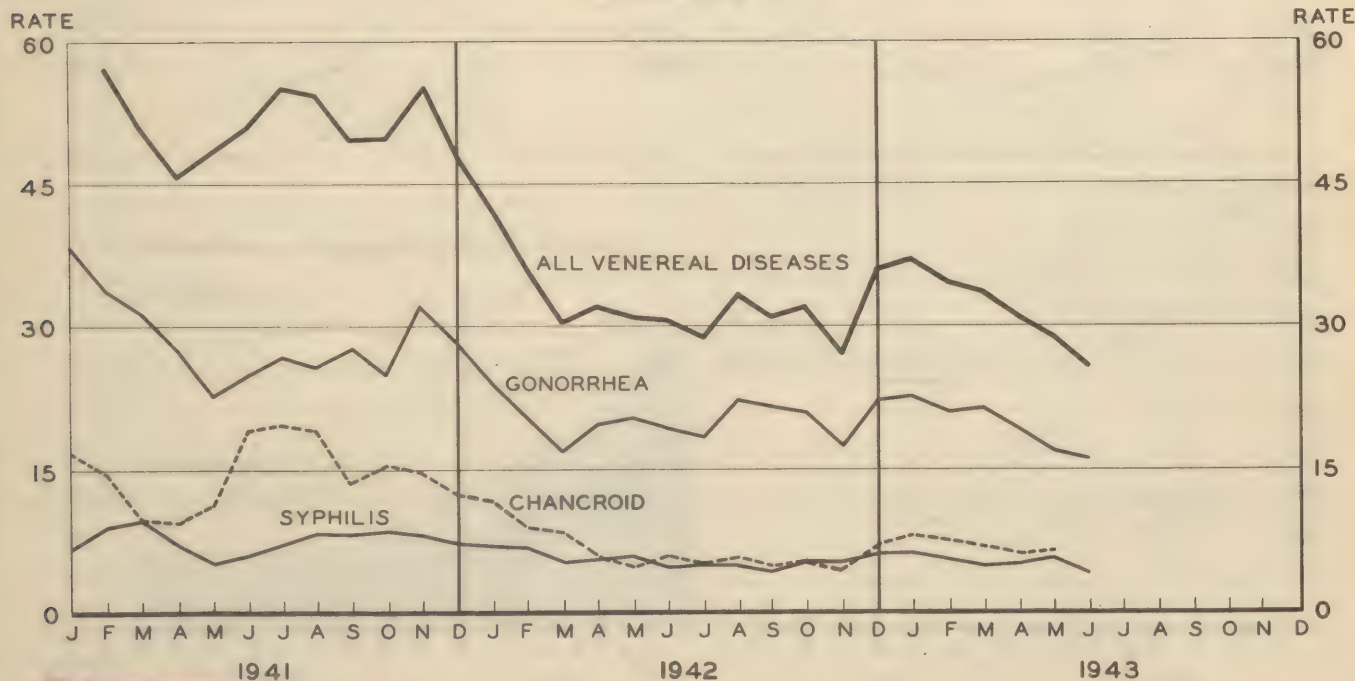
The total overseas experience rather parallels that of the U. S., except that chancroid presents much more of a problem overseas than in the U. S.

VENEREAL DISEASE ADMISSIONS PER THOUSAND MEN PER YEAR

ARMY IN THE CONTINENTAL U.S.



OVERSEAS



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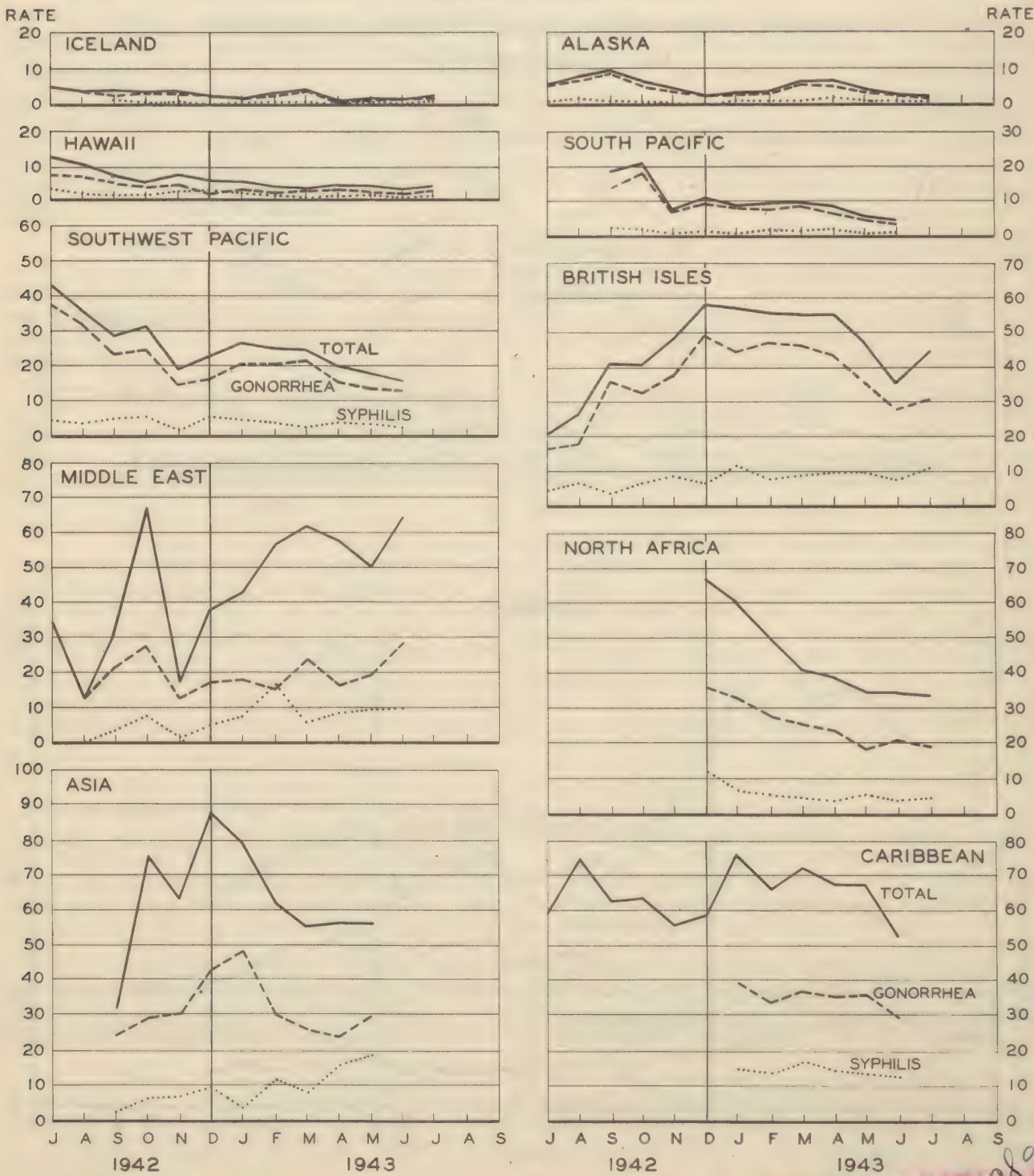
DISEASE AND INJURY

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VENEREAL DISEASE, OVERSEAS COMMANDS

The total overseas rates shown on the preceding page conceal the tremendous variation among individual commands. In the charts which follow the experience of each theater or other command is shown by means of rates for all venereal diseases, for gonorrhea, and for syphilis. Many factors operate to produce the variation, especially type of duty, characteristics of the civilian population, percentage of Negro troops, and the like. The contrast between the Caribbean rates and those for Hawaii is noteworthy. Recent observations made in Hawaii suggest that there the Army has succeeded in establishing a superior degree of control over infection. The latest rate for the Caribbean is for June, and is the lowest reported in the past year.

VENEREAL DISEASE ADMISSIONS PER THOUSAND MEN PER YEAR
OVERSEAS COMMANDS



HOSPITALIZATION

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UTILIZATION OF AND REQUIREMENTS FOR BEDS IN NAMED GENERAL HOSPITALS

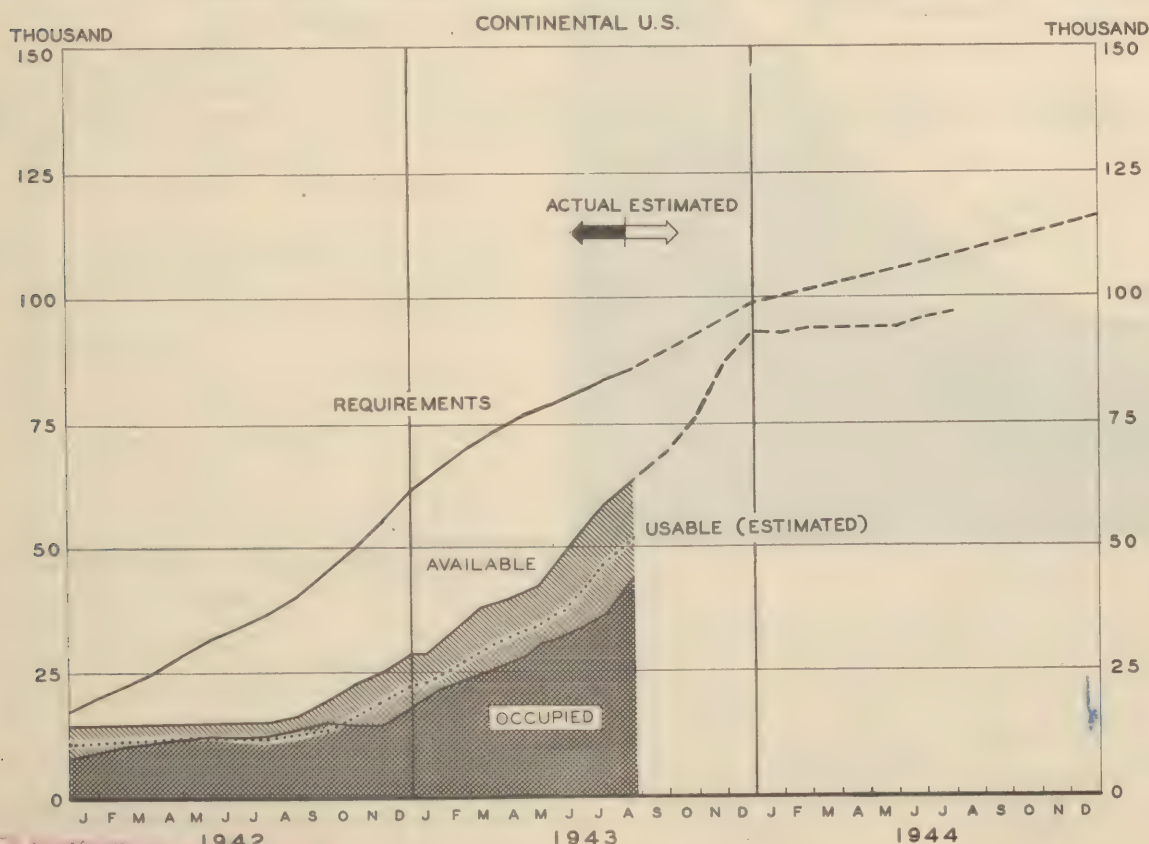
The requirements for beds in general hospitals are calculated at one percent of total Army strength plus 0.7 percent of the troops overseas. The estimated needs for the period January 1942 to December 1944 are shown in the chart below, the dashed projection having been revised recently. The line of projected availability reflects construction and conversion in progress, and is revised each month as estimated dates of occupancy become available for new facilities. Attainment of the present schedule would provide about 93,000 beds by the end of December, or 94 percent of the requirement for that date.

Too much emphasis cannot be placed upon the fact that the anticipated needs for beds in general hospitals have not yet developed because the Army has enjoyed excellent general health and especially because the flow of evacuees from overseas has not attained the proportions which planning has necessarily assumed. A margin of unoccupied beds represents an indispensable safety factor, whereas a deficit would justifiably open the War Department to censure by an informed public expecting unprecedented hospital facilities for Army personnel. The recent experience in connection with the landing on Kiska affords a good example of the good fortune thus far enjoyed by the Medical Department. Instead of an anticipated several thousand evacuees there were almost none.

The broken line close to the line of occupancy represents the average limit of normal utilization without overcrowding, since at any one time about 20 percent of the available beds cannot be used because of the importance of maintaining specialized wards, e. g. for women, surgical patients, patients suffering from contagious and infectious diseases, and the like. When more than 80 percent of the normal beds are occupied, the average hospital has found it necessary to crowd beds into corridors and solaria, or to place patients in expansion barracks.

The number of available normal beds in named general hospitals increased about eleven percent during the period 24 July to 28 August, when 64,500 were reported. During this interval the intensity of utilization rose from 62 percent to 67 percent. It is important to note that this increase has occurred during a month of the year when a low rate of utilization is ordinarily assumed.

REQUIRED AND AVAILABLE GENERAL HOSPITAL BEDS



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HOSPITALIZATION

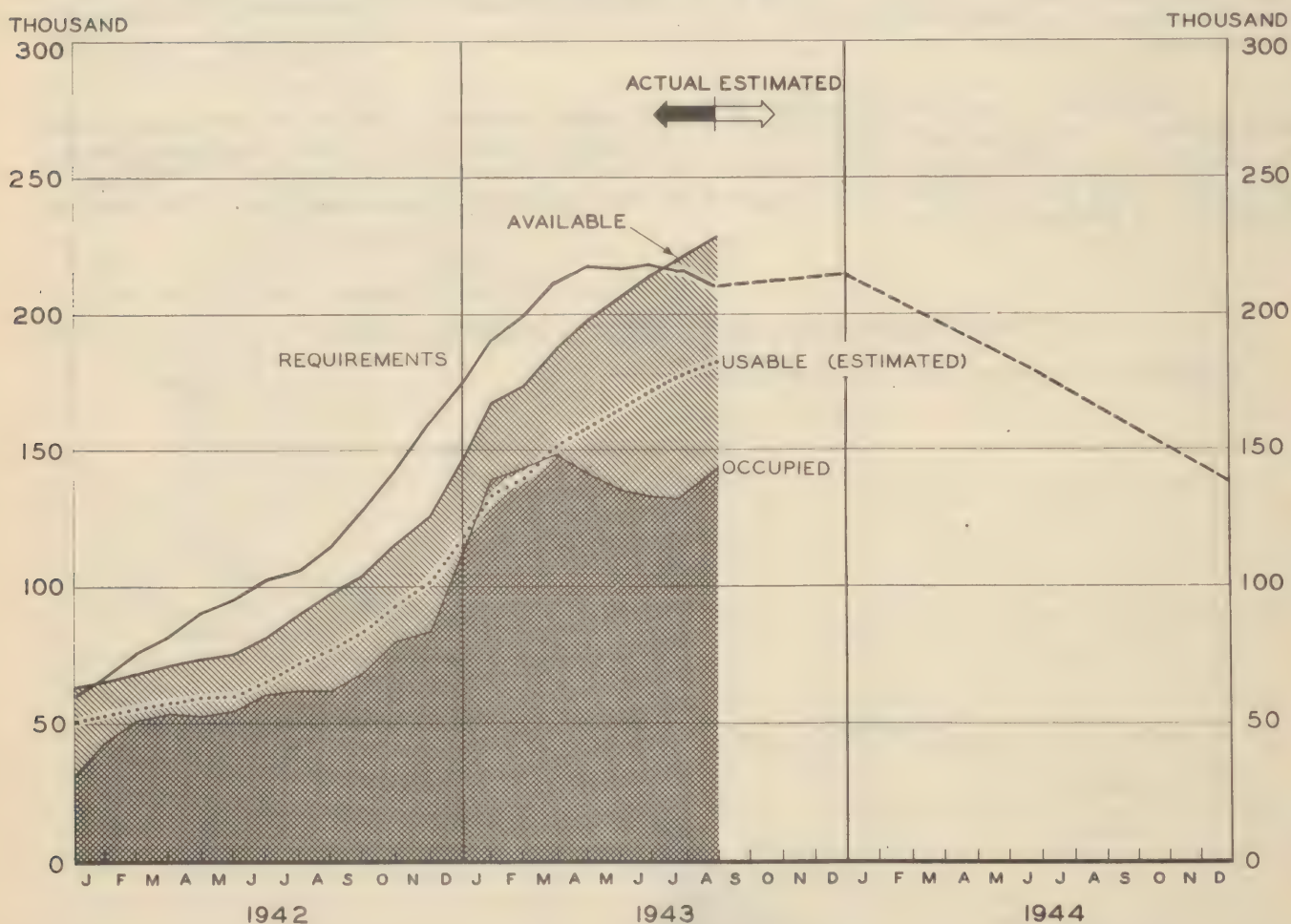
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UTILIZATION OF AND REQUIREMENTS FOR BEDS IN STATION HOSPITALS

The requirements for beds in station hospitals in the Continental U. S. are calculated on the basis of 4 percent of the strength of the troops to be stationed here, with an allowance for prisoners of war. The uppermost line on the chart below gives a revised estimate of the need for beds in station hospitals through the end of 1944. The other lines show the total number of occupied beds, the number of available normal beds, and the estimated number of usable normal beds (80 percent of the number of available normal beds), to indicate average utilization without overcrowding.

The curves for available and occupied beds exclude those reported from the several maneuver areas, since they belong chiefly to numbered units, but include some beds more properly classified as dispensary beds. On this basis the number of normal beds available in station hospitals was 227,800 on 28 August, about five percent above the figure of 217,000 reported for 24 July. The percentage utilization increased slightly from 62 to 63 percent of available normal beds during this interval.

REQUIRED AND AVAILABLE STATION HOSPITAL BEDS
CONTINENTAL U. S.



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HOSPITALIZATION

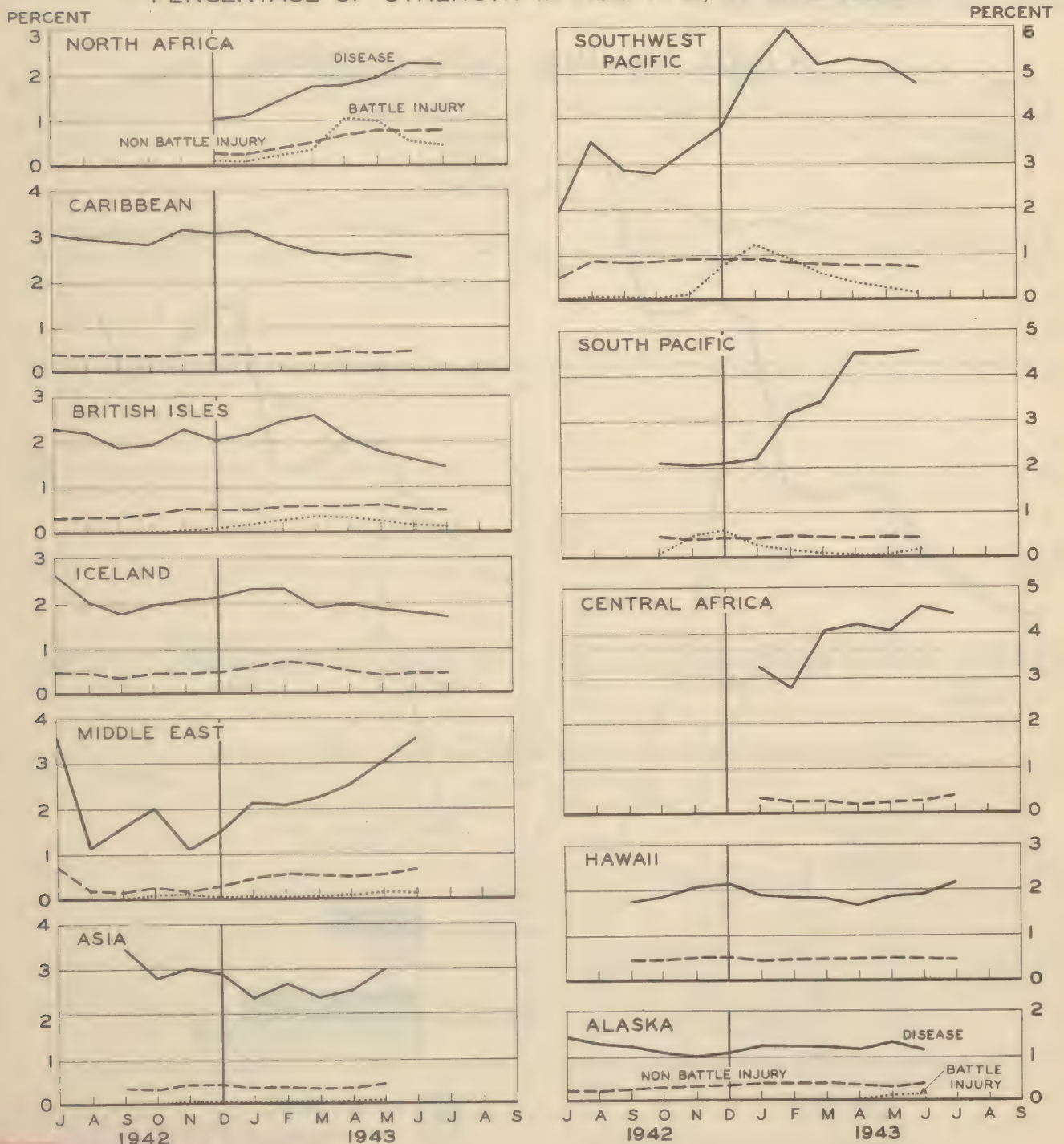
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COMPONENTS OF HOSPITAL LOAD OVERSEAS

The chief element in the hospital load overseas, as well as at home, is the number of patients suffering from disease. In no theater do battle casualties occupy nearly so many beds as do patients admitted for various diseases. In the charts which follow, the percentage of strength hospitalized in each command is separated into the portions associated with disease, nonbattle injury, and battle injury.

In North Africa and the Southwest Pacific the percentage of strength hospitalized for battle injuries has equalled or exceeded one percent, but elsewhere it has thusfar been almost negligible. In the South Pacific the figure has probably been held to a minimum by rapid evacuation from that area. The percentage of strength in hospital because of disease is especially high for the South Pacific, Southwest Pacific, Central Africa, and the Middle East.

PERCENTAGE OF STRENGTH IN HOSPITAL, BY DIAGNOSIS



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HOSPITALIZATION

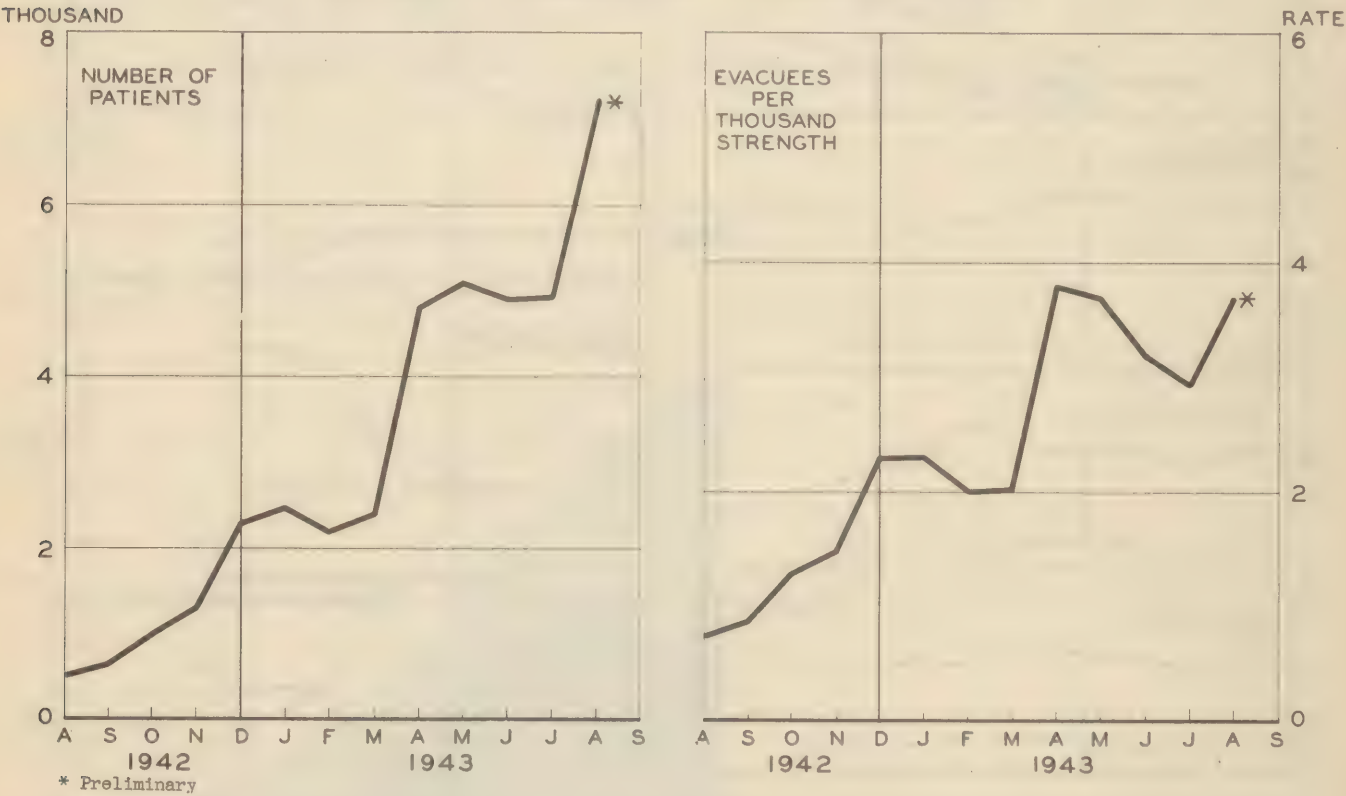
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EVACUATION OF PATIENTS FROM OVERSEAS

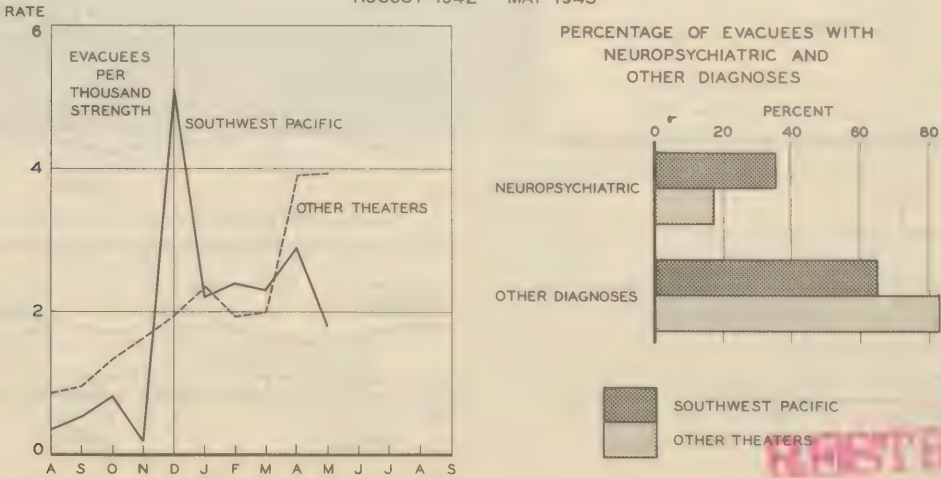
During August more patients were received from overseas than in any previous month of the war. The preliminary total of 7,200 patients corresponds to a rate of 3.7 evacuees per thousand strength per month. Reports of patients waiting in ports of evacuation and expected to accumulate during September suggest that the number of evacuees in September will at least equal and probably exceed that for August. The preliminary figure for August has been added to the first set of charts below, which give the number of evacuees per month in both absolute and relative form.

In the lower set of charts a comparison is made between the Southwest Pacific and other theaters with respect to the rate and type of evacuation. The left-hand panel gives the rates of evacuation from the Southwest Pacific and from all other areas. The bar chart to the right compares the proportions of neuropsychiatric and all other patients evacuated from the Southwest Pacific and elsewhere through May 1943. Other categories for the evacuees from the Southwest Pacific include 12 percent for battle casualties and 6 percent for patients with nonbattle injuries.

PATIENTS EVACUATED FROM OVERSEAS



PATIENTS EVACUATED FROM SOUTHWEST PACIFIC AND FROM OTHER THEATERS
AUGUST 1942 - MAY 1943



MORTALITY

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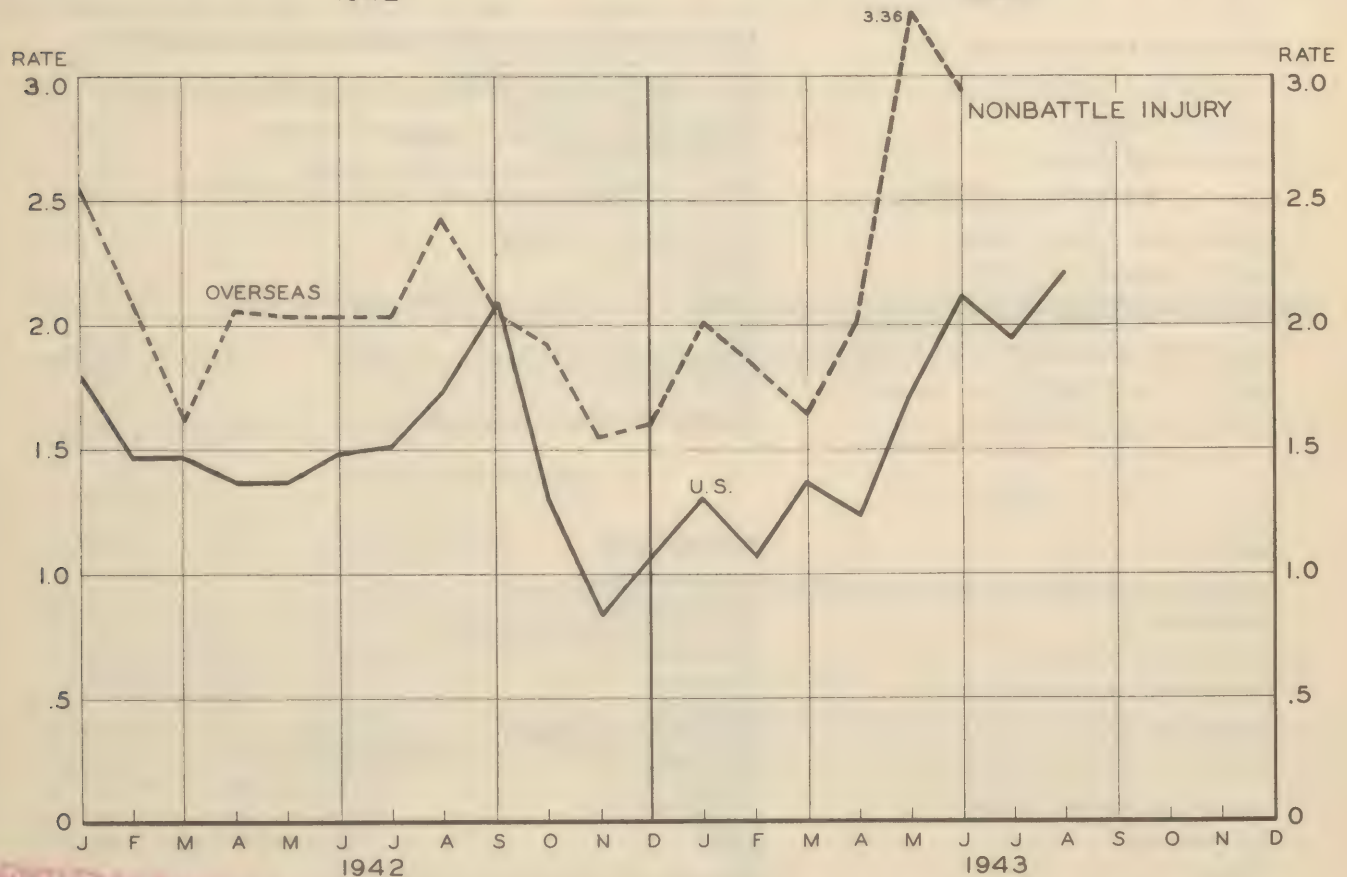
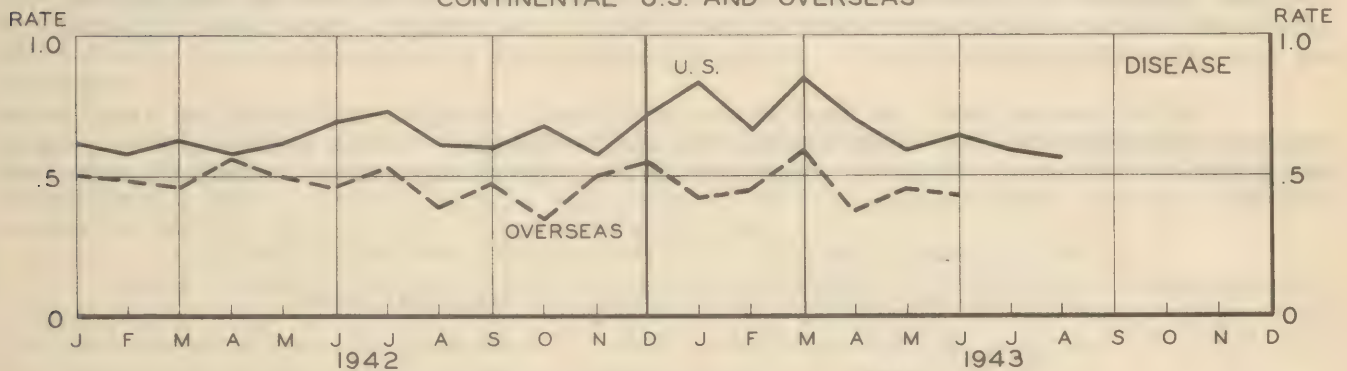
MORTALITY FROM NONBATTLE CAUSES

During June, July, and August the death rate from disease among troops stationed in the Continental U. S. has maintained an exceptionally low level. The preliminary rate for August is only 0.56 deaths per thousand men per year. The death rate from disease overseas also remains low, the latest point being .43 for June. The following page contains a discussion of the rather consistent differential between the two series plotted in the first chart below.

In recent months the death rates associated with nonbattle injury have been climbing both at home and abroad. Tentative rates of 2.1, 1.9, and 2.2 are recorded for troops in the Continental U. S. during June, July, and August. The overseas rates continue at a much higher level. A correction for May brings the overseas rate to 3.4 deaths per thousand men per year, and the preliminary June rate is 3.0, about 50 percent above the corresponding U. S. rate. This margin, which has prevailed rather consistently between the two sets of rates shown in the chart at the bottom of the page, is discussed on a subsequent page.

DEATHS PER THOUSAND MEN PER YEAR, NONBATTLE CAUSES

CONTINENTAL U.S. AND OVERSEAS



MORTALITY

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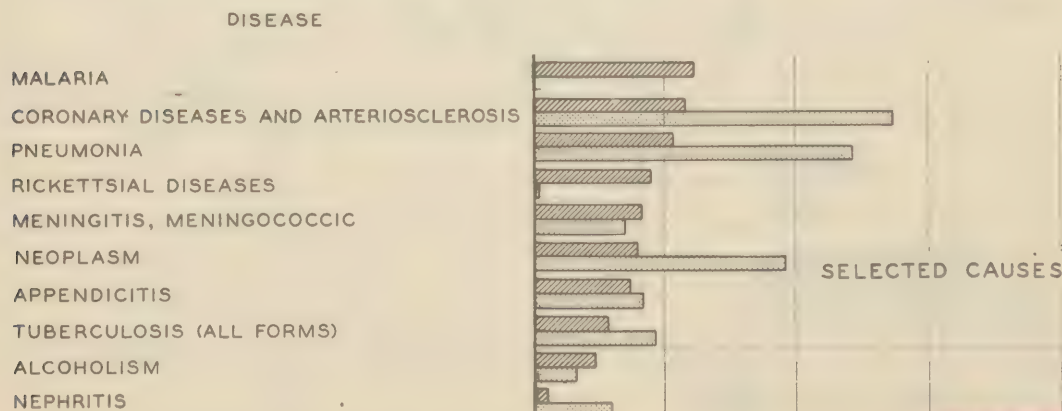
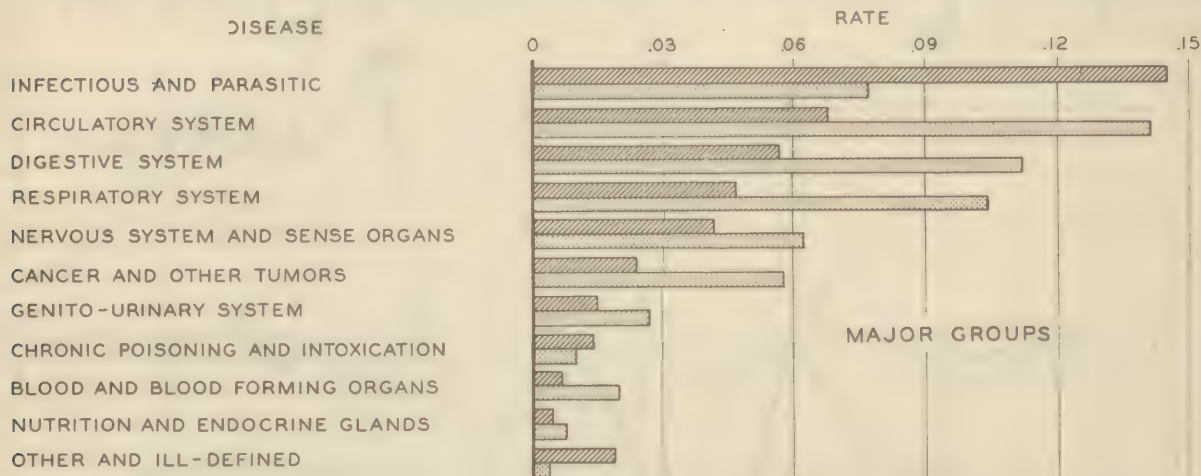
CAUSES OF DEATH, U. S. AND OVERSEAS

Although it is not yet possible to tabulate by cause all the deaths from diseases contracted overseas, preliminary information is now available on the causes of deaths which actually occurred overseas during the first six months of 1943. In view of the consistent margin between rates for the U. S. and overseas it is illuminating to compare the incidence within the major groups of diseases and also for selected individual causes.

The first chart below ranks the disease-groups of the International List of Causes of Death according to the magnitude of the corresponding overseas rates, shown as dark bars. The lengths of the lighter bars denote the corresponding rates, also preliminary in form, for troops in the U. S. during 1942, no major change having occurred in the death rate for disease during the interim. The relatively greater importance of infectious and parasitic diseases abroad is striking. For almost every other group, however, the U. S. rate exceeds the overseas rate. The components of the overseas rate for infectious and parasitic diseases are chiefly malaria, pneumonia, rickettsial diseases, notably scrub typhus which has been especially prevalent in the Southwest Pacific, and tuberculosis. Like the admission rates and the noneffective rates, therefore, the death rates emphasize the importance of preventive medicine abroad.

The great differences apparent for the other more important groups, especially the so-called degenerative diseases, are understandable in the light of the age and physical selection of men for overseas duty, and of the policy of evacuating certain types of patient to the Zone of the Interior.

In the second chart the leading causes of death overseas are ranked and their rates compared with those for the U. S. during the earlier period. It is perhaps not surprising that malaria should head the list. Considerably more deaths might have been anticipated from

DEATHS FROM DISEASE PER THOUSAND MEN PER YEAR⁷ARMY OF THE CONTINENTAL U.S.  AND OVERSEAS 

* Overseas, January-June, 1943; U.S., 1942

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MORTALITY

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CAUSES OF DEATH, U. S. AND OVERSEAS (Continued)

among the tens of thousands of malaria admissions in the Pacific. The rough estimates of case-fatality are very low at one death for each 1,400 first admissions and are of the same order for the South and the Southwest Pacific.

The relative importance of rickettsial diseases may seem surprising. The chief component is mite-borne typhus, which is not to be confused with the epidemic, louse-borne typhus of the Old World. All the deaths classified in this fashion occurred in the Southwest Pacific, where rickettsial diseases constitute a real problem. At the request of General MacArthur, the U. S. A. Typhus Commission is preparing to study this problem in the Southwest Pacific with a view to its control there. The estimated fatality rate is roughly 4 per 100 admissions, considered low for mite-borne typhus.

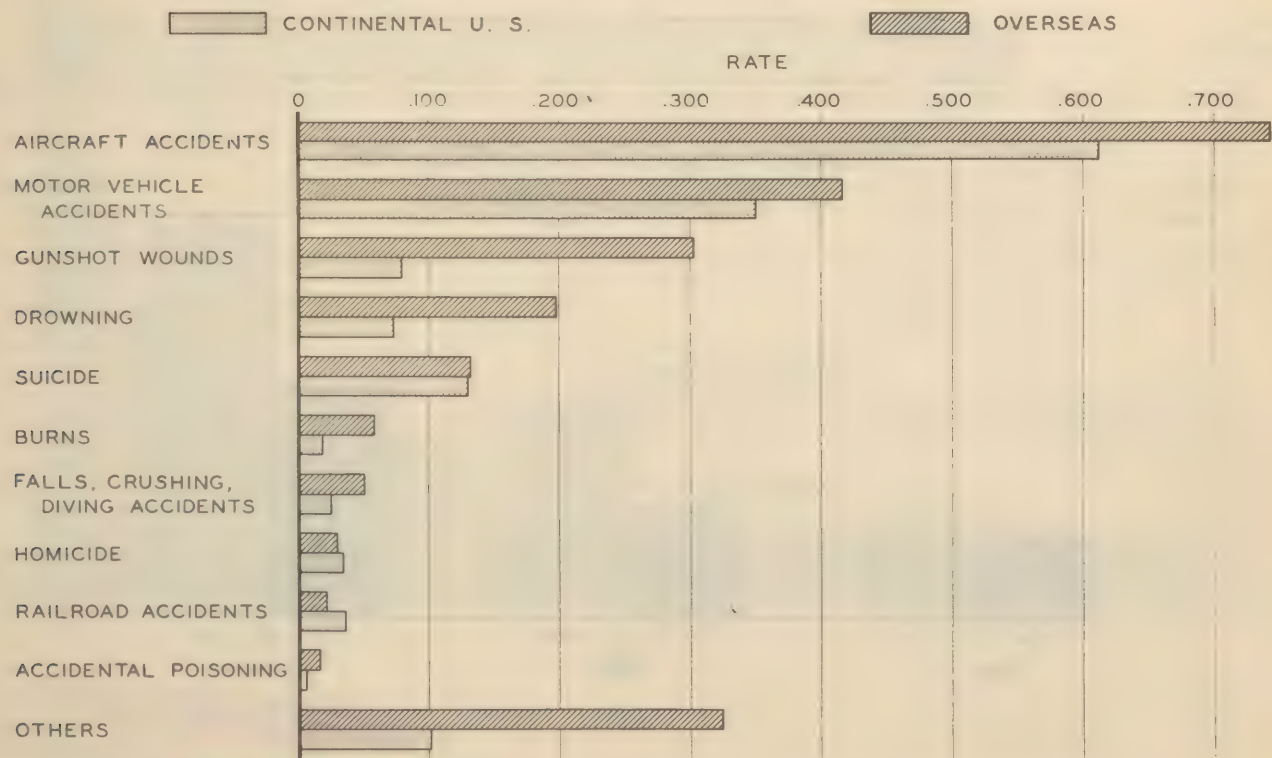
Although the overseas death rate for disease is consistently below that for the U. S., the reverse holds for mortality from nonbattle injuries. Overseas admission rates for injury are also higher than those for the U. S. In order to ascertain the relative importance of various individual types of accident, a separate tabulation was prepared for all the reported overseas deaths from nonbattle injury during the first six months of 1943.

Comparison of the resulting rates with those for the U. S. suffers somewhat from lack of precise correspondence in the dates covered, and the reports of causes of death are preliminary in character. However, it is believed that the comparison is essentially valid. The individual rates are shown in the accompanying chart, aircraft accidents heading the list of causes.

Much of the margin between the U. S. and the overseas rates comes from the greater frequency of gunshot wounds and drowning. The incidence of suicide, on the other hand, is virtually the same for troops at home and abroad. It will also be noted that the ranking of causes is similar, only suicide being far out of line.

The "other" category for the overseas experience contains more deaths from ill-defined causes than is true of those tabulated for the Continental U. S. Chief among these is a set noted only as "skull fracture", with a death rate of .096; a proper distribution of the ill-defined deaths would further lengthen some of the overseas bars.

DEATHS FROM SELECTED NONBATTLE INJURIES
PER THOUSAND MEN PER YEAR



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MEDICAL CAUSES OF REJECTION, WAC

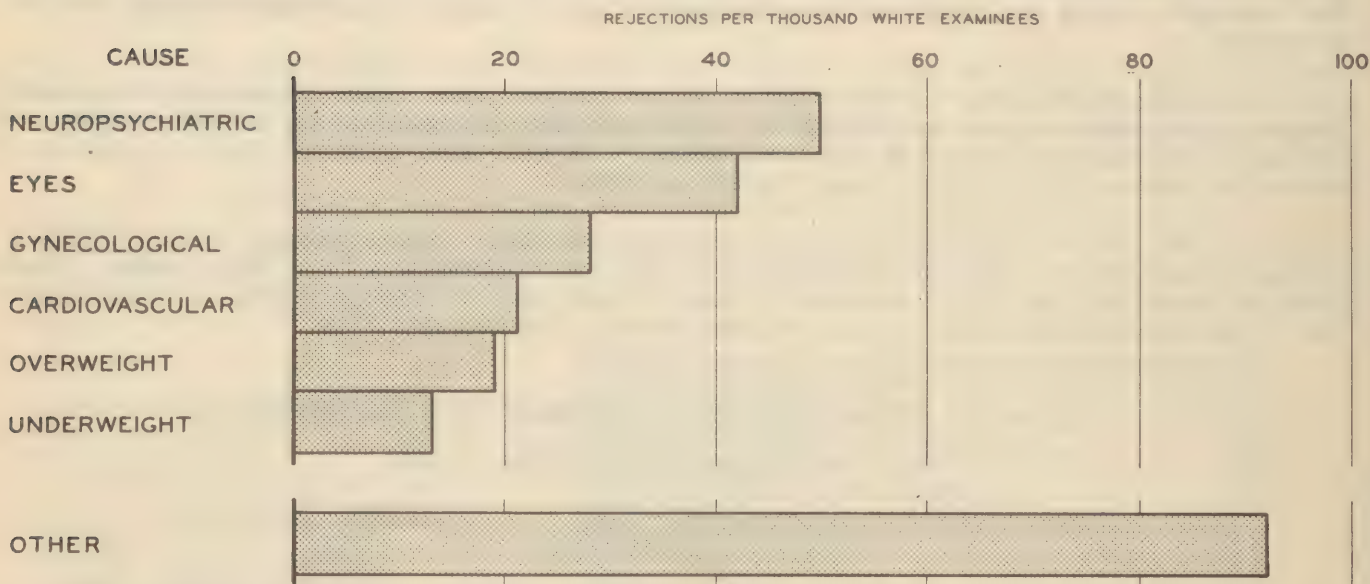
Data have recently become available as to the proportion of medically examined WAC candidates (some applicants do not present themselves for examination) who have been rejected on physical or mental grounds during the period November 1942 - June 1943.

The first chart below ranks the major causes of medical rejections for white examinees during April, May, and June. The two outstanding causes of rejection were neuropsychiatric and visual disorders, the third being gynecological conditions. The total rate for this period was 265 per thousand examinees. Among Negro examinees gynecological conditions ranked first, with 48 out of 376 rejections per 1,000 examinees during the same period.

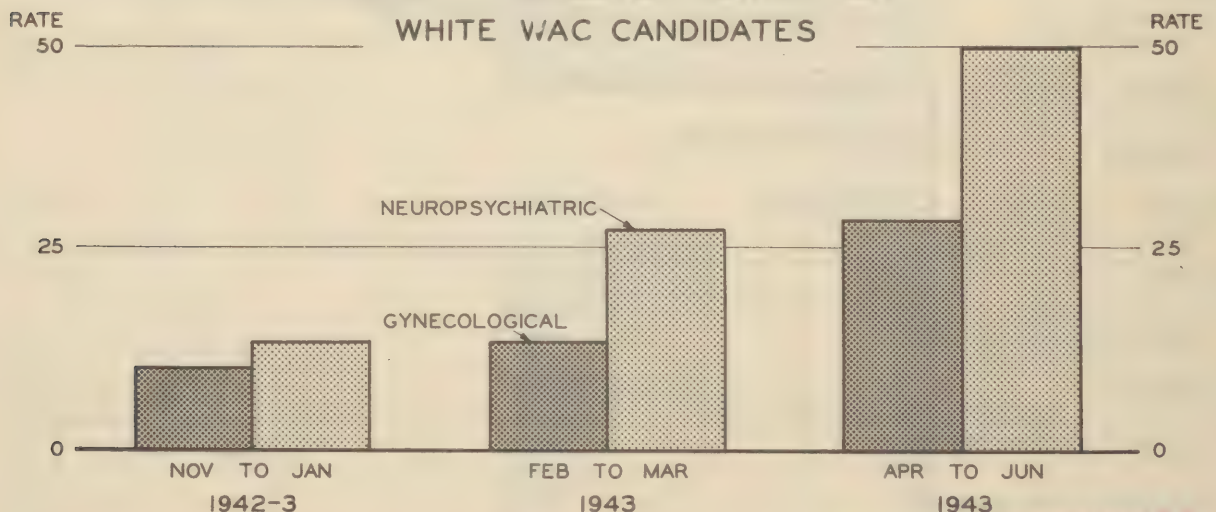
There has been a distinct upward trend in the medical rejection rate for whites since November 1942, more than half of it attributable to rejections for neuropsychiatric and gynecological diagnoses of one kind or another. The second chart gives the rates for these causes at three different time periods. For the same periods the total rates were 180, 223, and 265 for whites and 298, 368, and 376 for Negroes.

MEDICAL CAUSES OF REJECTION, WAC

APRIL - JUNE 1943



TREND IN REJECTION RATES FOR WHITE WAC CANDIDATES



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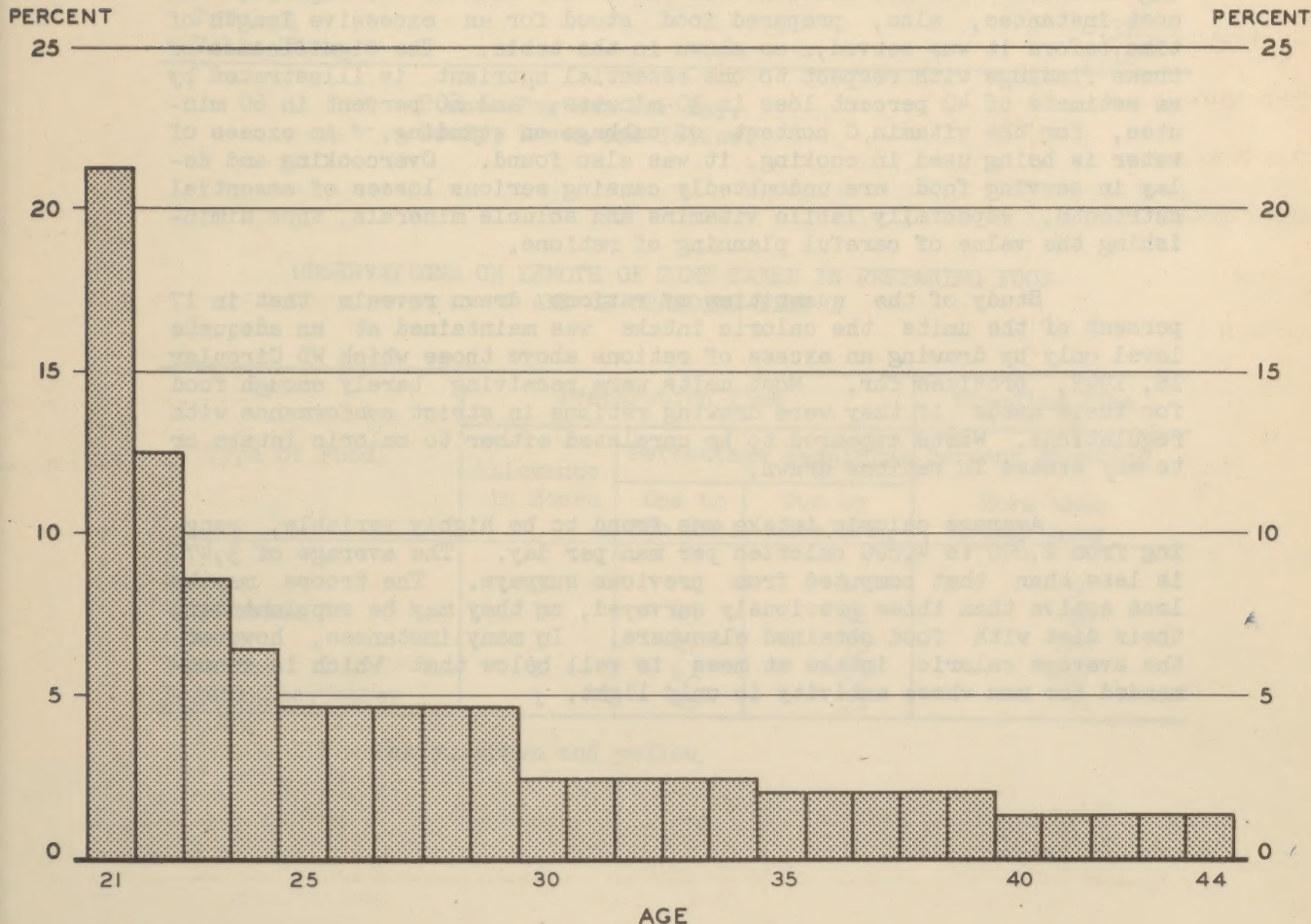
DISCHARGES FOR DISABILITY, WAC

The rate of disability discharge among the WAC has increased during 1943. During May it was roughly twice that reported for the Army as a whole, but the absolute numbers are, of course, fairly small.

During June more than 50 percent of the discharges were for neuropsychiatric reasons. More than 90 percent of this group carried a diagnosis of psychoneurosis, the rate of discharge for which has increased more rapidly than that from any other cause. Second in importance were gynecological disorders, which accounted for about 20 percent of the discharges.

Study of the discharges by age at discharge indicates that the rate of discharge increases sharply with advancing age. The age distribution of the WAC candidates examined and accepted for service in June is drawn in the chart below. For ages 21 to 24 the bars give the percent at each single year of age; thereafter, for five-year age periods, they give the average number of candidates accepted by single years of age.

AGE DISTRIBUTION OF WAC
CANDIDATES ACCEPTED IN JUNE, 1943



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MISCELLANEOUS

RESULTS OF NUTRITION SURVEYS

Nutrition surveys and reports have indicated that administrative efforts (cf. WD Circular 16, 1943, and Sec. II, WD Circular 179, 1943) to reduce food waste in the Army have operated to reduce food issued or planned to such a level that considerable initiative may be required on the part of supply officers and unit commanders to provide sufficient food to meet the needs of troops.

During the first week of June nutrition surveys were made of 99 messes at 38 ground force stations, representing approximately 130,000 individual rations consumed. In the first table there are shown the average quantities of food planned, consumed, and wasted for classes of food having similar nutritive value. Food planned is that provided for the menu during the month of survey. Food consumed is the average quantity eaten in the mess, and excludes waste. Waste, shown in percentage terms, is the average amount of edible food not eaten and includes both plate and kitchen waste. The amount of waste has been converted to units of food as purchased in order to permit comparison. The wastage of vegetables, important sources of essential nutrients, is noteworthy. Menus should be planned more nearly in accordance with the dietary habits of the troops. Table or plate waste is about equal to the kitchen waste in the messes studied.

Its preparation is an important element in both the palatability and the nutritional value of food served at mess. The latter is especially true of foods having a high vitamin content. Observations on cooking and standing time were made and the accompanying table summarizes the results. For each type of food listed there, an ample allowance has been made for preparation, and the percentage of operations involving an excess of this allowance is shown for each of two degrees. In most instances, also, prepared food stood for an excessive length of time before it was served, as shown in the table. The significance of these findings with respect to one essential nutrient is illustrated by an estimate of 40 percent loss in 30 minutes, and 60 percent in 60 minutes, for the vitamin C content of cabbage on standing. An excess of water is being used in cooking, it was also found. Overcooking and delay in serving food are undoubtedly causing serious losses of essential nutrients, especially labile vitamins and soluble minerals, thus diminishing the value of careful planning of rations.

Study of the quantities of rations drawn reveals that in 17 percent of the units the caloric intake was maintained at an adequate level only by drawing an excess of rations above those which WD Circular 16, 1943, provides for. Most units were receiving barely enough food for their needs if they were drawing rations in strict conformance with regulations. Waste appeared to be unrelated either to caloric intake or to any excess in rations drawn.

Average caloric intake was found to be highly variable, ranging from 2,800 to 4,600 calories per man per day. The average of 3,470 is less than that computed from previous surveys. The troops may be less active than those previously surveyed, or they may be supplementing their diet with food obtained elsewhere. In many instances, however, the average caloric intake at mess is well below that which is recommended for men whose activity is only light.

MISCELLANEOUS

RESULTS OF NUTRITION SURVEYS (Continued)

QUANTITIES OF FOOD PLANNED, CONSUMED, AND WASTED
IN 99 ARMY MESSES,
June 1943

Type of Food	Average Quantity Per Man Per Day		
	Planned*	Consumed*	Wasted, Percent
Meat	.905	.810	6.4
(Pork)	(.113)	(.201)	(8.2)
Eggs	.147	.152	5.8
Milk	1.053	1.097	1.5
Butter	.065	.068	.5
Fats	.052	.051	2.3
Grain Prod.	.621	.518	9.1
(Bread)	(.361)	(.317)	(10.5)
Legumes	.055	.038	12.5
Sugar	.241	.241	1.2
Vegetables **	.501	.343	13.9
Tomatoes	.123	.139	3.6
Citrus	.329	.338	.6
Potatoes	.650	.533	9.7
Vegetables, Other	.289	.229	12.5
Fruits, Other	.292	.259	2.7
Total	5.360	4.848	
Number of Calories	3,764	3,468	-
Edible Waste			
Total *	-	-	0.32
Table Waste *	-	-	0.16

* - Pounds Per Man Per Day.

** - Leafy, Green and Yellow.

OBSERVATIONS ON LENGTH OF TIME TAKEN IN PREPARING FOOD
AND ON STANDING-TIME

Type of Food	Preparation Time			Standing Time
	Allowance in Hours	Percentage Requiring		Percent Standing More than Half-hour
		One to Two Hrs.	Two or More Hrs.	
Meats	2	-	40	62
Vegetables *	1	43	26	76
Salads	1	17	75	100
Potatoes	1	61	15	27
Vegetables, other	1	15	33	61

* - Leafy, green and yellow

MISCELLANEOUS

MEAT, MEAT-FOOD, AND DAIRY PRODUCTS

Because the need for the Type C ration in Newfoundland fell somewhat short of anticipated needs, about 75,000 cases were recently declared surplus and returned to an Army depot in the U. S. for inspection by the Veterinary Corps and for any necessary reconditioning. Since a portion of the meat components of the rations had been packed about 36 months before, the rations assembled about 18 months before, and the cases shipped to Newfoundland and stored there in the open, according to reports, they may be regarded as having been subjected to an exceptionally severe field test.

By 1 September 40,000 cases had been inspected, and 97 percent of the meat components found to be sound and suitable for issue following necessary reconditioning of any rusty cans. The chief element in the unexpectedly small loss was rust, believed to have arisen from the period of storage in the open.

The critical need for milk in the diet of the soldier has encouraged experimentation in the preparation of reconstituted milk consisting of equal parts of whole fresh milk and reconstituted fresh milk prepared from bulk evaporated milk. Approximately 6,000 gallons of such blended milk (pasteurized) were used at Camp Gordon, Georgia, during August. A report from this station, including results of laboratory examinations, indicates that, with only two exceptions, the product met the provisions of the specification under which the milk was purchased. It also shows that there was no appreciable difference in the flavor of pasteurized blended milk and pasteurized fresh milk. Although it is possible to prepare a satisfactory reconstituted milk from bulk condensed milk in this fashion, the procedure admits of more opportunity for contamination and deterioration, especially under present war conditions, than is the case with reconstituted milk prepared from high grade milk powder and fresh cream or butter. Because of this, The Quartermaster General has been informed that under present conditions the use of reconstituted milk of this particular character should not be generally encouraged, but authorized only after all practical efforts to secure a satisfactory supply of fresh fluid milk have failed.

The adequacy of the control exercised by the Medical Department over milk supplies is demonstrated by the fact that no outbreak of disease among troops has been attributed to fresh pasteurized milk during the present war.